

ONKYO SERVICE MANUAL

QUARTZ SYNTHESIZED TUNER AMPLIFIER MODEL TX-36



UD, UDN, BUD, BUDN	120V AC, 60Hz
UG, UGV, BUG, BUGV	220V AC, 50Hz
UW	120 or 220V AC, 50/60Hz
UQB	240V AC, 50Hz

Silver and black models

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

SPECIFICATIONS

AMPLIFIER SECTION

Power Output:	50 watts per channel, min. RMS, at 8 ohms, both channels driven, from 20 Hz to 20 kHz, with no more than 0.04% THD.
Music Power Output:	2 x 110 watts at 4 ohms, 1 kHz (DIN)
Continuous Power Output:	2 x 75 watts at 8 ohms, 1 kHz (DIN)
Total Harmonic Distortion:	2 x 75 watts at 4 ohms, 1 kHz (DIN) 2 x 50 watts at 8 ohms, 1 kHz (DIN) 0.04% at rated power 0.04% at 1 watt output
IM Distortion:	0.04% at rated power 0.04% at 1 watt output
Damping Factor:	35 at 8 ohms
Frequency Response:	20 – 30,000 Hz ± 1 dB
RIAA Deviation:	20 – 20,000 Hz ± 0.8 dB
Sensitivity and Impedance:	Phono: 2.5 mV/50 kohms Tape Play: 150 mV/50 kohms Tape Rec: 150 mV/3.5 kohms (phono)
Phono Overload:	180 mV RMS at 1kHz, 0.08% THD
Signal-to-Noise Ratio:	Phono: 85 dB (at 10 mV input, A weighted) 76 dB (IHF A-202)
Tone Controls:	Tape: 95 dB (A weighted) 80 dB (IHF A-202) Bass: ± 8 dB at 100 Hz Treble: ± 8 dB at 10 kHz
Loudness (-30 dB):	+7 dB at 70Hz, +5 dB at 10 kHz
Subsonic:	-6 dB at 15 Hz

ONKYO
AUDIO COMPONENTS

TUNER SECTION**FM:**

	120V model	220/240V model
Tuning Range:	87.5 – 108.0 MHz (100 kHz steps)	87.5 – 108.0 MHz (50 kHz steps)
Usable sensitivity:	Mono: 10.8 dBf, 1.9 µV Stereo: 17.2 dBf, 4.0 µV	Mono: 11.2 dBf, 1.0 µV Stereo: 18.0 dBf, 2.2 µV
50 dB Quieting Sensitivity:	Mono: 17.2 dBf, 4.0 µV Stereo: 37.2 dBf, 40 µV	Mono: 18.0 dBf, 2.2 µV Stereo: 37.2 dBf, 20 µV
Capture Ratio:	1.5 dB	1.5dB
Image Rejection Ratio:	40 dB	85 dB
IF Rejection Ratio:	90 dB	90 dB
Signal-to Noise Ratio:	Mono: 72 dB Stereo: 67 dB	Mono: 72 dB Stereo: 67 dB
Selectivity:	55 dB	50 dB DIN (±300 kHz 40 kHz dev.)
AM Suppression Ratio:	50 dB	50 dB
Harmonic Distortion:	Mono: 0.15% Stereo: 0.25%	Mono: 0.15% Stereo: 0.25%
Frequency Response:	30 – 15,000 Hz ±1.5 dB	30 – 15,000 Hz ±1.5 dB
Stereo Separation:	40 dB at 1 kHz	40 dB at 1 kHz
	30 dB at 100 – 10,000 Hz	30 dB at 100 – 10,000 Hz
Tuning Level (Hi/Lo):	23.2 dBf, 8 µV/17.2 dBf, 4 µV	23.2 dBf, 4 µV/17.2 dBf, 2 µV
Stereo Threshold:	23.2 dBf, 8 µV/17.2 dBf, 4 µV	23.2 dBf, 4 µV/17.2 dBf, 2 µV

AM:

Tuning Range:	520 – 1,710 kHz (10 kHz steps)	522 – 1,611 kHz (9 kHz steps)
Usable Sensitivity:	30 µV	30 µV
Image Rejection Ratio:	40 dB	40 dB
IF Rejection Ratio:	30 dB	30 dB
Signal-to-Noise Ratio:	40 dB	40 dB
Harmonic Distortion:	0.8%	0.8%

GENERAL:

Semiconductors:	EETs: 6 TR: 34 ICs: 11	EETs: 6 TR: 38 ICs: 11
Dimensions (WxHxD):	Diodes: 82 418 x 112 x 340 mm (16 1/2" x 4 1/2" x 13 3/8")	Diodes: 85 418 x 112 x 340 mm (16 1/2" x 4 1/2" x 13 3/8")
Weight:	8.1 kg., 17.8 lbs.	8.1 kg., 17.8 lbs.

SERVICE PROCEDURES

1. Replacing the fuses

For continued protection against fire hazard, replace only with same type and same rating fuse.

D (120V) model

Circuit no.	Parts no.	Description
F501, F601	252059	4A (SS-2), Speaker
F901	252049	4A (ST-6), Primary

G (220V) and Q (240V) models

Circuit no.	Parts no.	Description
F501, F601	252077	4A-SE-EAK, Speaker
F902	252074	2A-SE-EAK, Primary
F903, F904	252078	5A-SE-EAK, Secondary
F905, F906	252070	1A-SE-EAK, Secondary
F907	252088	250mA-SE-EAK, Secondary

W(120 or 220V) model

Circuit no.	Parts no.	Description
F501, F601	252059	4A (SS-2), Speaker
F901	252049	4A (ST-6), Primary
F902	252074	2A-SE-EAK, Primary

2. Replacing the lamps

This unit uses the lamps listed below.

Circuit no.	Parts no.	Description
PL901, PL902	210162	PL 6.3V, 250mA, Dial plate illumination

Remove the top cover.

Remove the front panel.

Remove the holder.

(See fig. 2)

3. Insulation resistance measurement (Only U.S.A. model)

Connect the insulating-resistance tester between the plug of power supply cable and terminal GND.

Specifications: $3.3 \pm 0.3M$ ohm

4. Disassembling procedures

Selector switch pc board

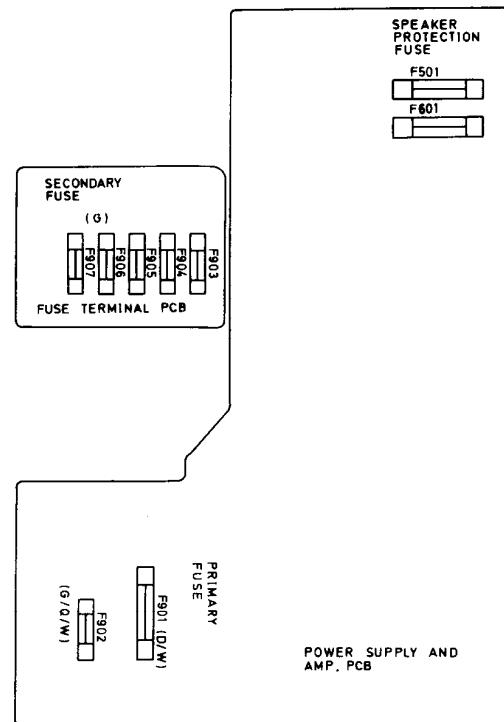
Remove the top cover.

Remove the all screws on the back panel.

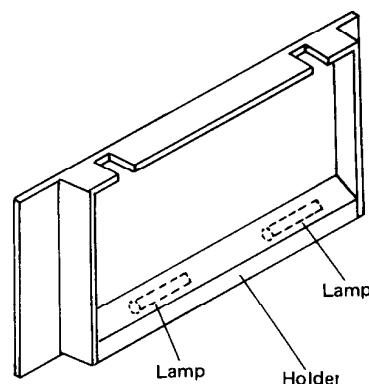
Remove a screw holding the radiator and bracket, pcb.

5. Change of AM scan step

W models are equipped with a switch to change the AM scan step frequency from 9kHz to 10kHz. The switch is located on the back panel. This switch is set to 9kHz at the factory; change to 10kHz if gives better results in your locality.



(fig. 1)



(fig. 2)

6. Change of De-emphasis

W models are equipped with a 50 μ sec-75 μ sec selector switch. This switch is located on the back panel. This switch is set to 50 μ sec at the factory, but may have to be reset to 75 μ sec depending on the area where the unit is used.

Europe: 50 μ sec

U.S.A.: 75 μ sec

7. Change of voltage

W models are equipped with a voltage selector to conform with local power supplies. This switch is located on the back panel. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

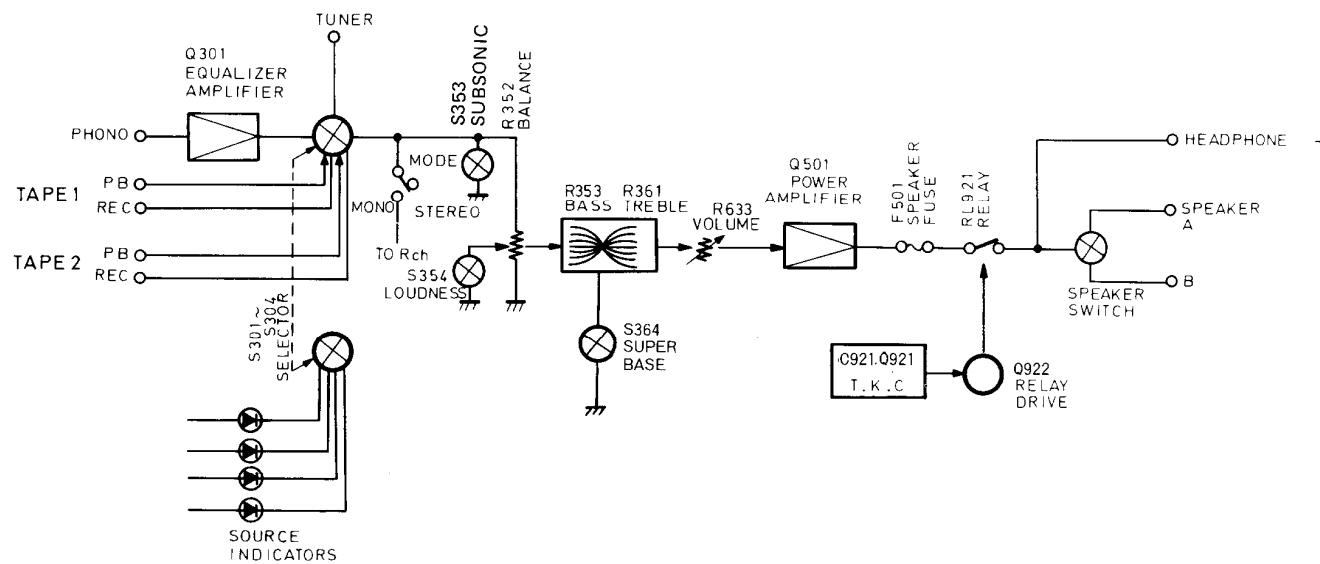
This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.

8. Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month to keep the back-up system operable. The period of time during which memory contents are preserved after power has last been turned off varies depending on climate and the location and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

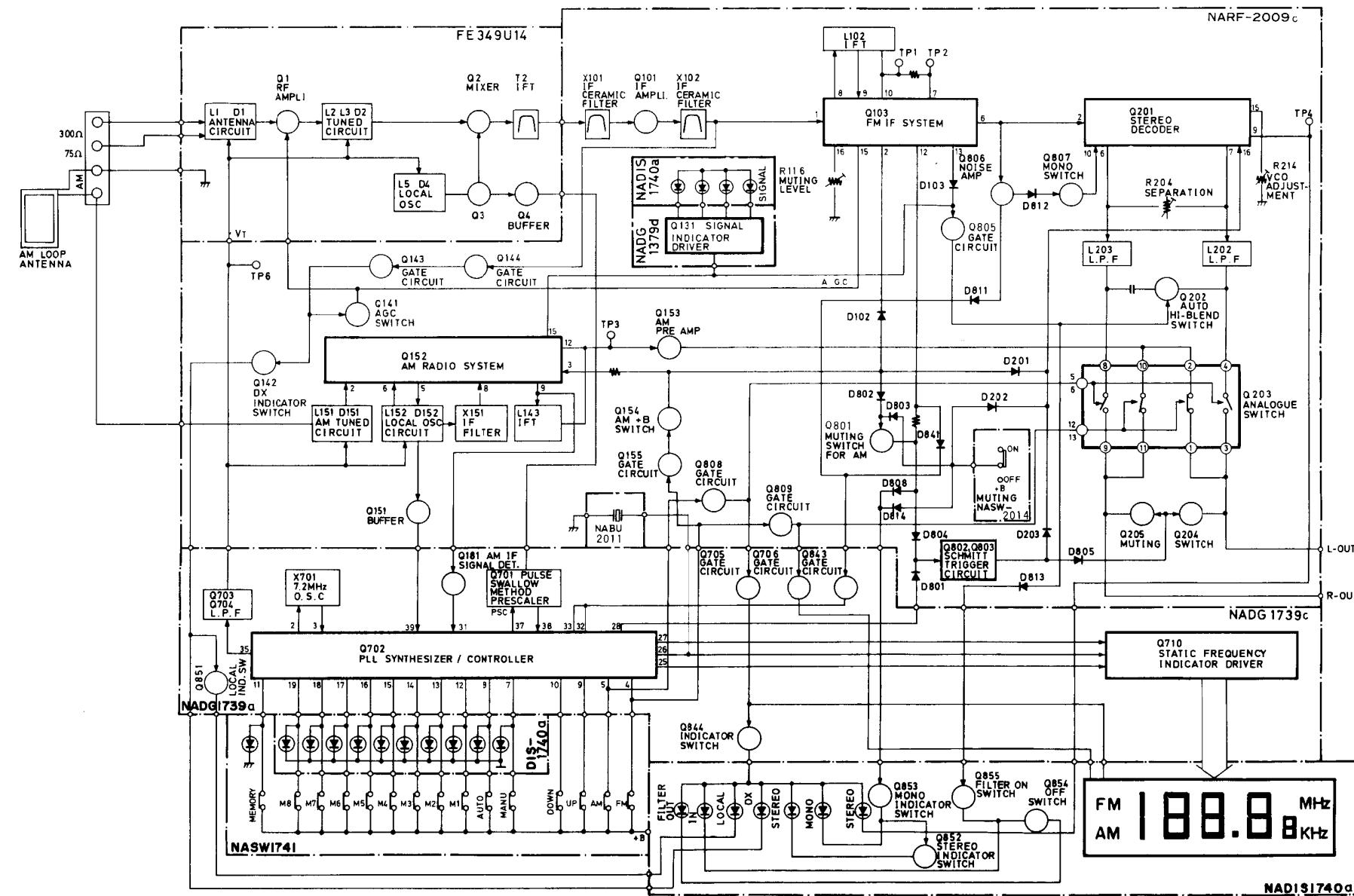
BLOCK DIAGRAM

Amplifier section



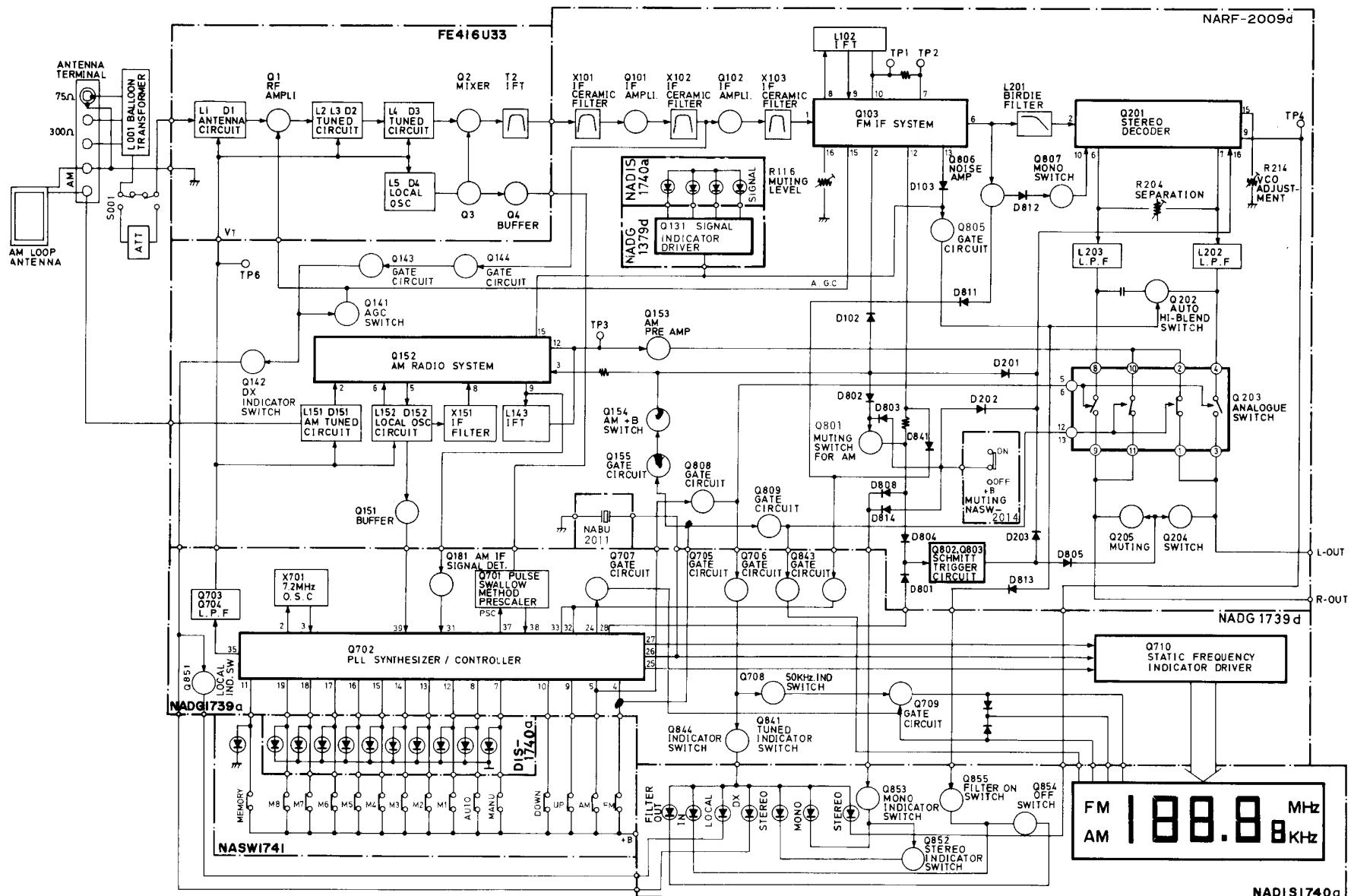
BLOCK DIAGRAM

–D model–



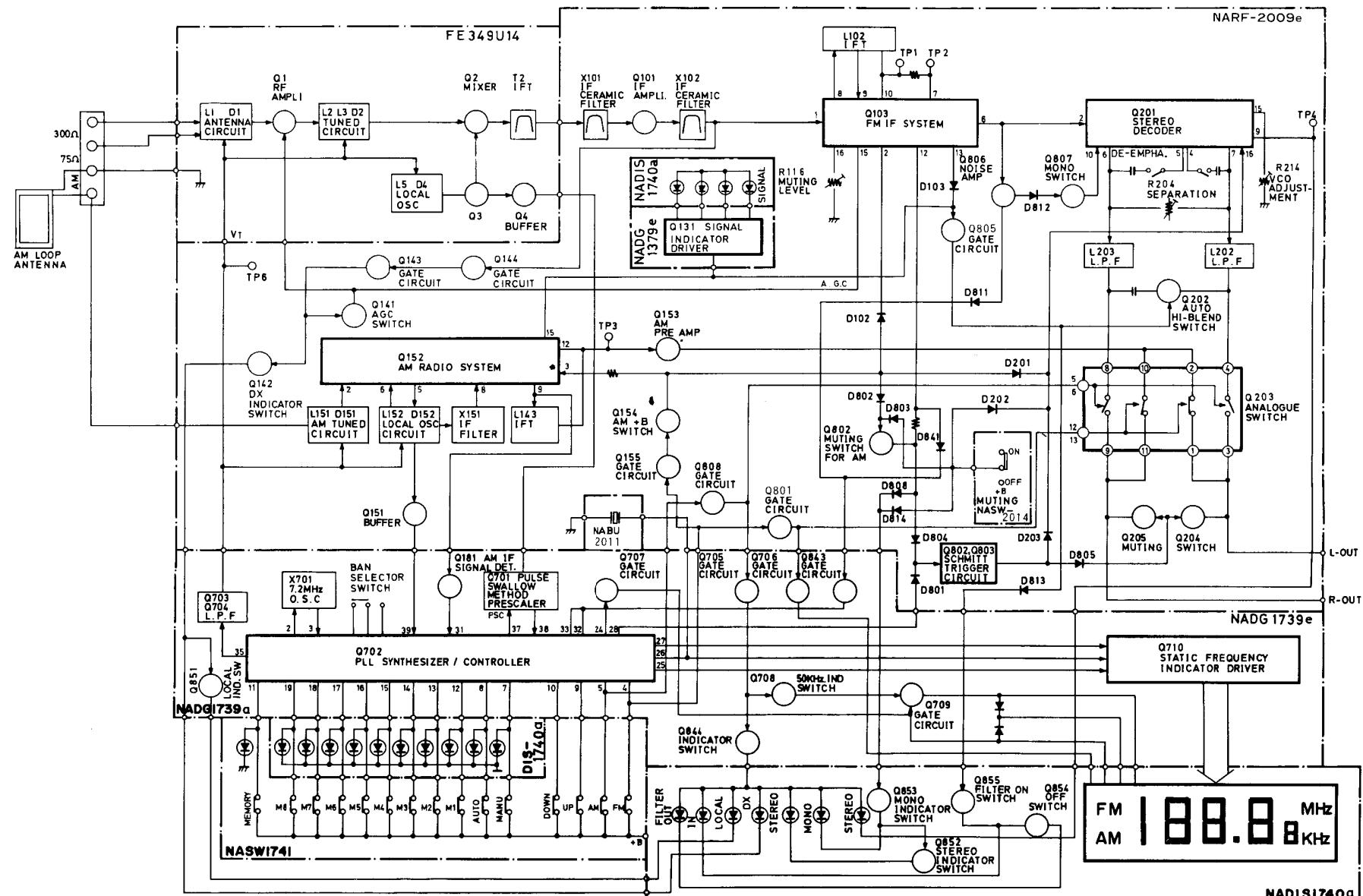
BLOCK DIAGRAM

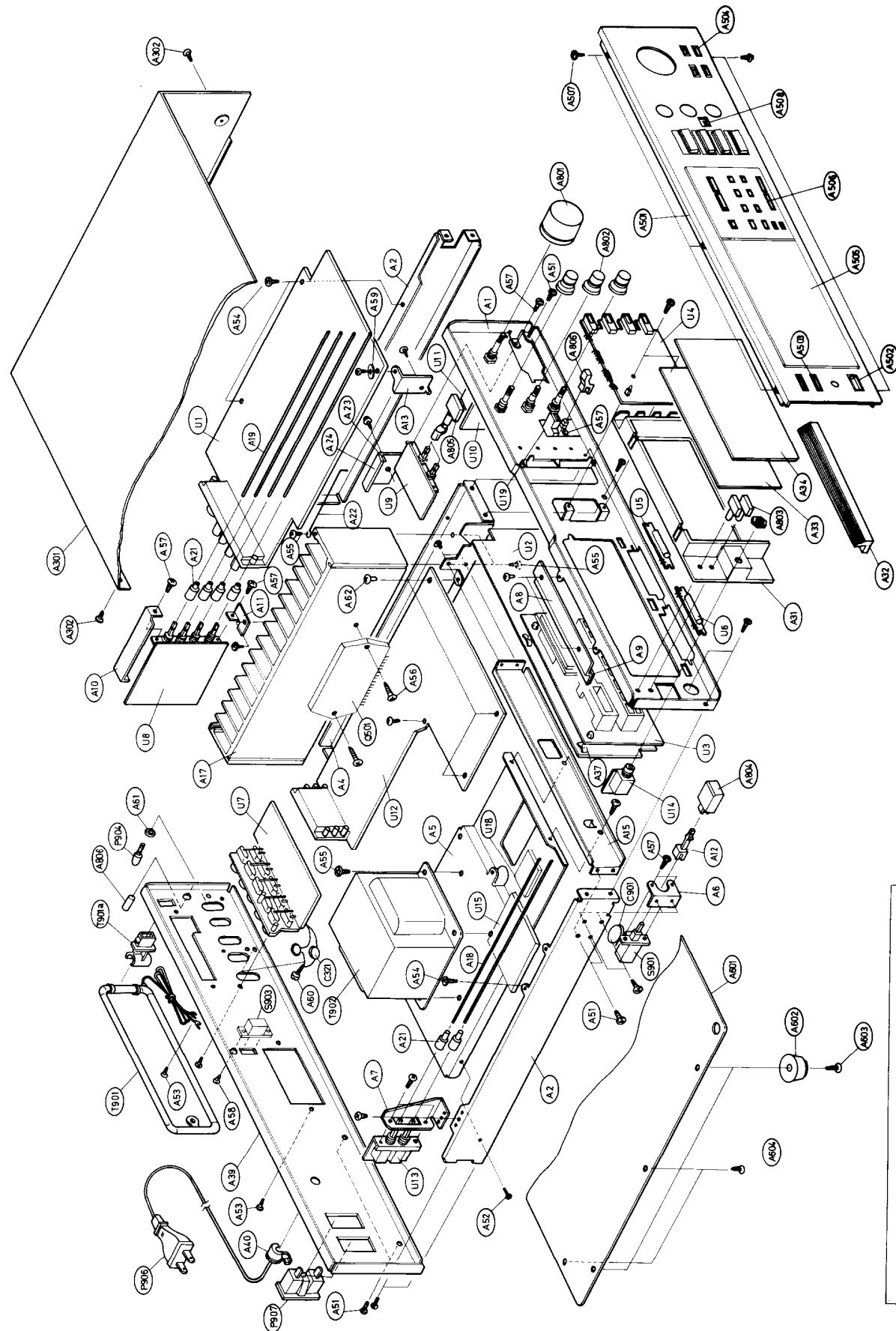
-G model-



BLOCK DIAGRAM

-W model-





NOTE: THE COMPONENTS IDENTIFIED BY MARK ▲ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

Notes: (D): Only 120V model
 (G): Only 220V model
 (W): Only 120/220V model
 (S): Only silver model
 (B): Only black model

DAIGAE
TX-36 UD

日付 : 85/04/17 ページ : 1

P/N	Location	SUB	Origional	Serial Range
	部品名	代替部品	正規部品	適用台数
590721	Q805,806,951,953	TRANSISTOR	2SC1815BL	2SC1815GR 2538-4137
590721	Q704	FET	2SK68AM	2SK68M 2538-4137
590627	Q805,806,951,953	TRANSISTOR	2SC1815BL	2SC1815GR 1738-2537
590809	Q704	FET	2SK68AM	2SK68M 4138-5637
590720	Q703	TRANSISTOR	2SC1815BL	2SC1815GR 2538-4137
590720	Q921	TRANSISTOR	2SC1815BL	2SC1815GR 2538-4137
590924	Q103	IC	MPC1267C	MPC1167C2 7138-8137
591017	Q101	TRANSISTOR	2SC1923R	2SC19230 8638-10637
600118	Q704	FET	2SK68AM	2SK68M 13338-14337

CHANGE OF PARTS

MODEL TX-36

10-31-8

ON KYO CORPORATION
SERVICE DIVISION

TYPE	CIRCUIT NO.	DESCRIPTION	AFTER CHANGE SPECIFICATIONS	PART NO	BEFORE CHANGE SPECIFICATIONS	PART NO.	APPLI-CATION	CHANGE DESCRIPTION
NARF-2009c/e	Q103 R116 R815 R149	IC Semi-fixed Carbon Carbon	μ PC1167C2 N08II50KBC R25J 330K R25J 4.7K	222608 5215046	μ PC1267C N08II20KBC R25J 75K R25J 1K	222803 5215003	5638- The supply of part is insufficiency.	
NAAF-2031c	C505, C605	Elect.	100 μ F,10V	3500080	100 μ F,10V	352731019	5638- To flame-proof type (UL)	
	PL901 PL902	Lamp pcb ass'y Lamp pcb ass'y Pilot lamp Pilot lamp Insulator plate	Abolition Abolition PL6.3V0.25A PL6.3V0.25A (Pc board)	210162 210162 28175110	NAPL-1743 NAPL-1744 Add Add Add		(UL) Change of material of pc board	
NARF-2009c	C801 C802	Elect. Elect.	1 μ F,50V 0,22 μ F,50V	352780109 352782299	0.22 μ F,50V Add	352782299	1738- Improvement of muting hysteresis.	
	A805	Knob ass'y Knob ass'y	(Silver) (Black)	28321583A 28321584A		28321583 28321584		
NARF-2009c	R124	Carbon	R25J 10K (Parallel C113)		Add		1738- To be stabilize the signal indicator.	

PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
A1	27110202-1A	Front bracket	A505	28191202	Clear plate
A2	27115145A	Side bracket	A506	28321584	Knob ass'y
A4	27130339B	Bracket,radiator	A508	27267333—	Guide S
A5	27130340A	Bracket,power transformer	A507	834430068	3TTS+6BBC,Tapping screw
A6	27140805	Bracket,power	A509	29110050	Aluminium tape on the front panel
A7	27140806	Bracket,speaker	A601	27170160	Bottom board
A8	27140807	Bracket,holder	A602	2717009A	Leg
A9	28140260	1.5×10×100mm.Cushion	A603	834430128	3TTTS+12B(BC),Tapping screw
A10	27140808	Bracket,selector	A604	831430088	3TTW+8BBC,Tapping screw
A11	27140809A	Bracket,S	A801	28320543-1	Knob,volume <S>
A12	27260062	Shaft,switch	A802	28320892	Knob,volume
A13	27140810A	Bracket,PCB	A803	28321205	Knob,balance <S>
A15	27130341	Bracket F	A804	28321206	Knob,balance
A17	27160133	Radiator	A805	28321207	Knob,push <S>
A18	27260123	Shaft,switch	A806	28321208	Knob,push
A19	27260124	Shaft	A807	28320852	Knob,power <S>
A21	2820135	Connector	A808	28321160	Knob,power
A22	27300656	Spring	A809	28321215	Knob,push <S>
A23	27140928	Bracket,PCS	A810	28321216	Knob,push
A24	28.75100	Insulating plate	A806	28321522	Knob,push <S>
A31	27.90220	Holder,pcb	A806	28321523	Knob,push
A32	27190221	Holder,lamp	A807	28320461	Knob,push <G>
A33	28.33103	Back plate	△ C901	3500065A	0.01μF,AC400V/125V,Capacitor IS
A34	28.30217	Dial plate	△ C901a	27300601	Cover for C901
A37	27190011	Holder	C321,C322	330924730	0.047μF,50V,Ceramic capacitor <D>
A39	27120595	Back panel <D>	C990	33562230	0.022μF,50V,Ceramic capacitor <D>
	27120596	Back panel <G>	△ F501,F601	252059	4A(SE-2);Speaker protection fuse<D/W>
△ A40	270280	SR-4K-4,Strainrelief	△ F501	252077	4A(SE-EAK,K,Speaker protection fuse<G>)
	834430068	3TTS+6BBC,Tapping screw	△ F901	252049	4A(ST-6),Primary fuse<D/W>
A51	834430068	3TTS+6BBC,Tapping screw	△ F902	252074	2A-SE-EAK,Primary fuse<G/W>
A52	834430108	3TTS+10BBC,Tapping screw	△ F903,F904	252078	5A-SE-EAK,Secondary fuse<G>
A53	831130088	3TTS+8BBC,Tapping screw	△ F905,F906	252070	1A-SE-EAK,Secondary fuse <G>
A54	834440089	4TTS+8BBC,Tapping screw	△ F907	252088	250mA SE-EAK,Secondary fuse <G>
A55	834430168	3TTS+16B(BC),Tapping screw	P904	25060044	Terminal,ground
A56	821430066	3P+6FNBC,Pan head screw	△ P906	253112	AS-U/C-4#18,Power supply cable<D>
A57	87613010	W3×10F,Washer	△	△	AS-CEE,Power supply cord <G/W>
A61	831430088	3TTS+8BBC,Tapping screw	253083-1	25050046	NSCT-2P15,AC outlet<D>
A62	82142604	2.6P+4Fe(BC),Pan head screw	P904	25050046	Terminal
A301	28184201	Top cover<S>	△ P906	253112	STK-4893,Power amplifier IC
A301	28184202	Top cover	△	△	NPS-111-L367P,Power switch
A302	834430068	3TTS+6BBC,Tapping screw	△	△	NPS-1258P,Voltage selector switch
A501	18188121	Front panel ass'y <S>	△	△	NSS-2225,Buzzer switch <W>
A502	27267215	Guide,holder	△ P907	223004-1	T901
A503	27267280	Guide,speaker	P908	223004-1	232085
A504	27267282	Guide,push	△ Q501,Q601	222036	AM loop antenna
A505	28198607	Clear plate	△ S901	25035398	T901a
A506	28221583	Knob ass'y	S902	25065123	27190105
A508	27267333—	Guide S	S903	250142	NPT-838D,Power transformer<D>
A501	18268121	Front panel ass'y 	T901	18188511	NABU-2011,Buzzer pc board ass'y
A502	27267215	Guide,power,	T901a	18148517	NATS-2017,Super base switch
A503	27267280	Guide,speaker	△ T902	230791	Guide,push
A504	27267282	Guide,push			

CIRCUIT DESCRIPTIONS

1. Synthesizer and controller operation

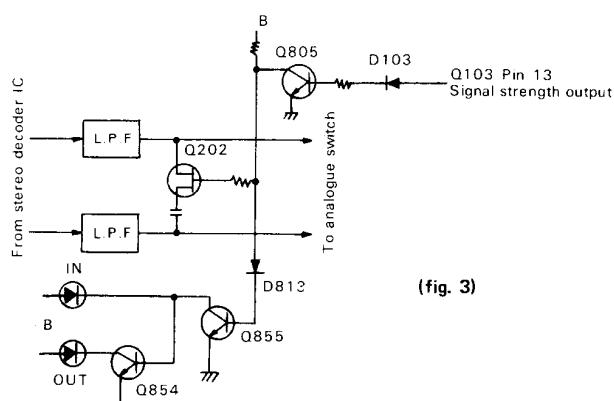
Pin No.	Symbol	Terminal	Description
1	GND	Ground	
2	XT		
3	XT	X'tal	Connected to the 7.2MHz crystal oscillator for the reference frequency.
4	FM	FM band specification input	
5	MW	MW band specification input	Mutual reset type, performs switching of each band, FM/MW/LW.
6	LW	LW band specification input	
7	MANUAL	Manual tuning mode specification input	
8	AUTO	Auto search tuning mode specification input	Mutual reset type, performs auto search and manual operation mode switching during UP/DOWN tuning.
9	UP	UP tuning key input	
10	DOWN	DOWN tuning key input	Connect the push key and perform UP/DOWN tuning.
11	STO	Memory store command input	The preset memory is set to the write mode when the key is pressed.
12-19	M1-M8	Preset memory channel specification input	Controls the write and read out of the internal 16-station preset memory along with the MC1 and MC2 input.
20	MC-1	Memory control input	Set the 16-station preset memory to the 8 FM/8 AM station mode or the FM/MW/LW 3-band 16-station random mode. The 8 FM/8 AM mode is used in this unit.
21	MC-2		
22	OSC2	AM oscillator terminal	CR connection terminal for the oscillator that determines the scan speed during the AM search mode.
23	OSC1	FM oscillator terminal	CR connection terminal for the oscillator that determines the scan speed during the FM search mode.
24	O/S	FM 50 kHz output	Output that represents the 50kHz FM band tuning step for European models. Goes to the high level for the 50 kHz setting.
25	CK2	Tuned frequency data output	Outputs the serial data and timing clock to the tuned frequency display driver.
26	CK1		
27	DATA		
28	MUTE	Muting signal output	Goes to the high level during muting output.
29	E2	Regin specification input	See table 1.
30	E1		
31	STOP 3	AM IF signal input	During AM reception, this counts the IF signal and stops auto search.
32	STOP 2	Auto search stop signal input	When the stop 1 input (pin 33) is at the high level and this terminal goes to the high level, auto search is stopped.
33	STOP 1	Scan speed slow input	When the high level is input at this terminal, the auto search speed is cut in half.

Pin No.	Symbol	Terminal	Description
34	D01	Error output	Charge pump output of the phase detector which constitutes the PLL. High level is output when the divided oscillation frequency is high than the reference frequency. In the opposite case, low level is output. Floating occurs when the frequencies match. The output is applied to the variable capacitor diode in the front end through low pass filter Q703 and Q704. The output from both terminals is the same, but only D01 is used.
35	D02		
36	TEST	Test terminal	Test mode at the high level.
37	FM IN	FM programmable counter input	Connect to the prescaler output (Pin3 of Q701)
38	PSC	Pulse swallow control output	Output to the control the division ratio of the prescaler.
39	AM IN	AM local oscillator signal input	Terminal for input of AM broadcast signal.
40	INH	Inhibit input	Operates normally at the high level. Inhibit status at the low level.
41	INT	Initialize input	Operates normally at the high level. At the low level, the internal status is initialized.
42	V _{DD}	Power supply	Device power terminal; supplies 5V during the normal operation and 2.5V from the super capacitor (C715) for memory preservation.

table 1.

E1 (Pin 30)	E2 (Pin 29)	Region	Band	Frequency range	Intermediate frequency	Scan step	Reference frequency
0	1	U.S.A	FM	87.5 ~ 108.0 MHz	+10.7 MHz	100 kHz	25 kHz
			AM1	520 ~ 1 710 kHz	+450 kHz	10kHz	10 kHz
			AM2	522 ~ 1 710 kHz	+450 kHz	9kHz	9kHz
1	0	Europe	FM	87.50 ~ 108.00 MHz	+10.7 MHz	50 kHz	25 kHz
			MW	522 ~ 1611 kHz	+450 kHz	9 kHz	9 kHz
			LM	153 ~ 360 kHz	+450 kHz	1 kHz	1 kHz
0	0	Japan	FM	76.0 ~ 90.0 MHz	-10.7 MHz	100 kHz	25 kHz
			AM	522 ~ 1611 kHz	+450 kHz	9 kHz	9 kHz

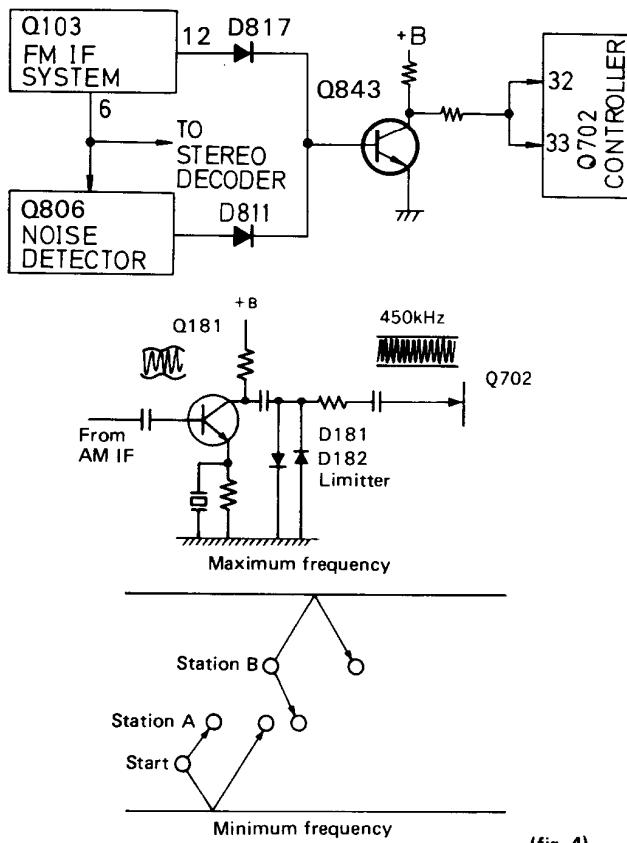
2. Auto-Hi-blend circuit



(fig. 3)

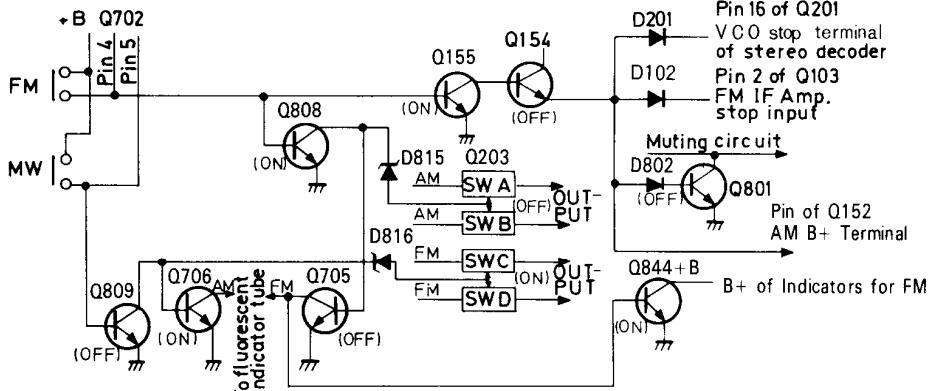
There is a 3-stage IF level detection circuit in the IC of Q103. A direct current voltage approximately proportional to the electrical field intensity is output from output pin 13. This is used to turn off Q805 and turn on Q202 when the electrical field is weak and, making use of the fact that the phase of noise components in the high range of stereo broadcasts is reversed left-right, the left and right channels are mixed in the high range to reduce noise. At the same time, Q855 is turned on and Q854 is turned off, and the IN LED of filter lights on.

3. Auto-search tuning circuit



(fig. 4)

4. FM/AM selector circuit



(fig. 5)

The FM/AM selector circuit is shown in the diagram, fig. 5. Pins 4 and 5 of Q702 are of the mutual reset type. For FM, pin 4 is high and pin 5 is low; for AM, pin 4 is low and pin 5 is high. Because pin 5 is high and pin 4 is low during AM reception, Q809 is on and Q808 is off, the analogue switches SW1 and SW2 of Q203 are on while SW3 and SW4 are off, so an AM signal is output. Also, since Q706 goes to on and Q705 to off, the AM, kHz segments of the fluorescent display are turned on. Q844 goes to off so the FM indicators are turned off. At the same time, Q155 is turned

During FM reception, this is operated by the IF level detection and zero point detection circuits included in the FM IF system IC of Q103 and by the noise component detection circuit of Q806. When a station is tuned, the output of all outputs go to the low level so Q843 goes from on to off, causing pins 32 and 33 of the controller IC to go to the high level to complete auto search tuning.

During AM reception, the AM IF signal is taken, amplified by Q181, limited to a certain amplitude by the D181-D182 limiter circuits and auto search tuning is completed when the IF signal becomes 450 ± 3 kHz.

• Manual Tuning

When the UP or DOWN key is pressed, the frequency goes up or down by one step. When either key is held down, the frequency rapidly increases or decreases (scans) and stops when the key is released. When either end of the tuning range is reached, key input will no longer be received and the frequency will stop at the highest or lowest frequency.

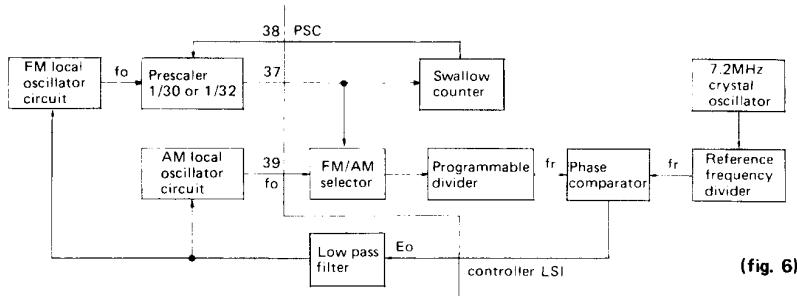
• Auto Tuning

When the UP or DOWN key is pressed, scanning begins in the up or down direction, stopping where there is a radio station. Since auto scan is operated by a triangular wave, scanning is begun in the opposite direction the instant either end of the tuning range is reached. Also, if the UP or DOWN key is pressed when the tuned frequency is not at either end of the range, up or down scanning will begin.

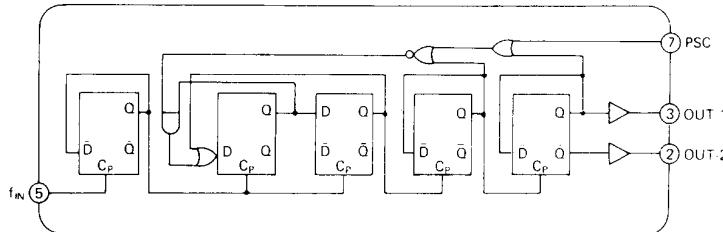
off and Q154 turned on, so +B is supplied to the power source terminal of the radio system pin 3 of Q152.

Pin 16 of Q201 goes to the high level, the VCO oscillator stops, and pin 2 of Q103 goes to the high level so the FM IF amp is also switched off. Also, during AM reception, Q801 is turned on so the muting circuit is off. During FM reception, all of the switching transistors mentioned above perform the opposite operations to switch to the FM mode. Figures in parentheses indicate transistor operation during FM reception.

5. PLL tuned circuit



(fig. 6)



(fig. 7) TD6104P (Prescaler)

A block diagram of the tuned circuit of the PLL is shown in figure 6.

Operation during AM reception

The reception frequency is applied to the programmable divider where it is divided to 1/N and output as fv. This is applied to the phase comparator where it is compared with frequency reference fr (9kHz for G/W model and 10kHz for D model). If fr and fv differ, Eo equal to the difference in frequency is output. Since error output Eo is a pulse waveform, it is passed through the low pass filter to change it into DC voltage V_D, which is applied to the variable capacitor diode in the front end to change the reception frequency. This continues until fv and fr are the same and Eo=0.

Operation during FM reception

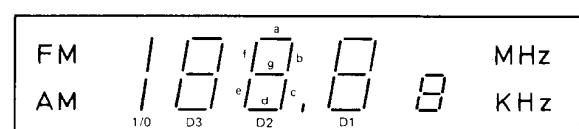
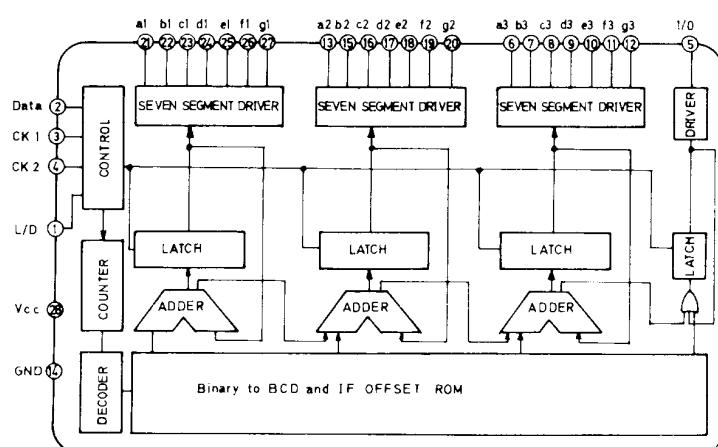
The pulse swallow method is used in the prescaler of this unit. In this type of prescaler, a supplementary number

(changed according to the program code input) and the divided reception frequency from the prescaler are combined in the control counter and the prescaler's division factor is switched 1/30 or 1/32 according to external control (1/32 when the PSC terminal is "H" and 1/30 when it is "L").

The station oscillator frequency is applied to the programmable divider, but the programmable divider has an upper frequency limit of only 30MHz, so the pulse swallow-type prescaler, which can be used up to 150 MHz, is inserted for division to 1/Np;

The signal is applied to the programmable divider and divided to 1/N. The result is compared with a 25kHz frequency reference in the phase detector and the error is output as Eo until a match is obtained as in AM operation.

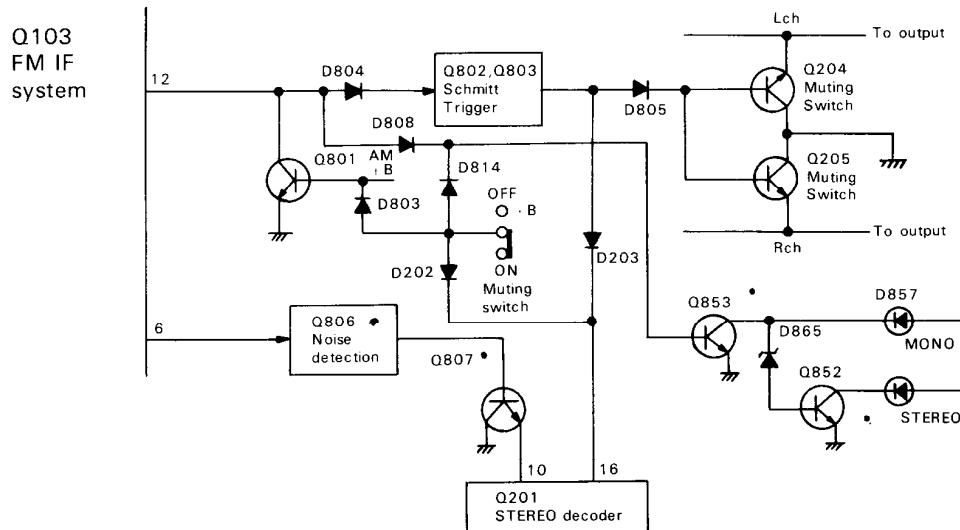
6. Frequency indicator circuit



(fig. 8) TD6301AP block diagram

Pin No.	Terminal	Description
1	L/D	Output indication switching input terminal: Fluorescent display at the low level, and LED display at the high level.
2	Data	Tuned frequency data input terminal: Input from the system controller LSI to the serial.
3,4	CK1, CK2	Tuned frequency data input control timing input terminal: Transferred simultaneously with data from the system controller LSI.
5	I/O	Segment drive output terminal: Sets the number of display digit for FM (100MHz) and AM (1,000kHz) reception.
6-12	a3-g3	Seven segment drive output terminals: Sets the number of display digit for FM(10MHz) and AM (100kHz) reception.
13, 15-20	a2-g2	Seven segment drive output terminals: Sets the number of display digit for FM (1MHz) and AM (10kHz) reception
21-27	a1-g1	Seven segment drive output terminals; set the number of display digit for FM (100kHz) and AM (1kHz) reception
14	Vcc	Power source terminal
28	Gnd	Ground

7. Muting circuit



The muting circuit operates in the following cases.

1. While pin 28 of the controller IC outputs the high level, Q204 and Q205 are turned on and muting is closed in the following cases: (1) While the manual UP/DOWN switch is being held down, (2) When a station in the memory is recalled, and (3) While a radio station is being received using auto search tuning.
2. When an FM station is not being received (and the muting switch is on).

The IF level in the FM IF system (set at R116 so muting is opened at 17 dBf) and zero point detection circuit (tuning point $35 \pm 15\text{kHz}$) are output at pin 12 through

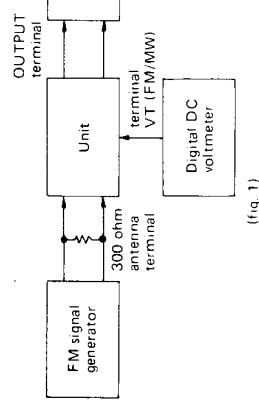
the AND circuit. When a station is tuned, the output goes to the low level.

When output goes to the low level, Q802 is turned off, Q803 is turned on and Q203 and Q204 are turned off, so muting is opened. At the same time, pin 16 of stereo decoder Q201 goes to the low level, so the VCO oscillator starts.

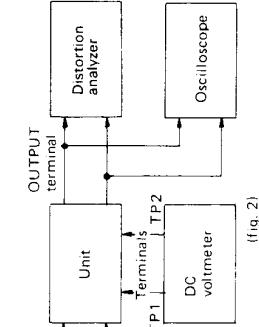
ADJUSTMENT PROCEDURES

FM section

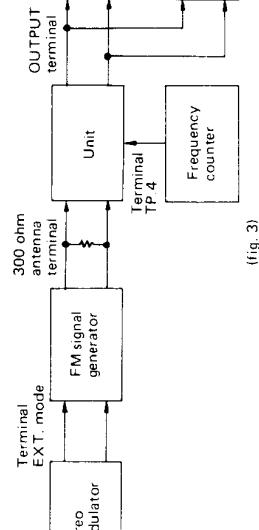
Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Turning dial setting	Output indicator	Adjustment	Adjust for	Remarks
FM RF	1	Fig. 1	—	—	88.0 MHz	Digital DC voltmeter	T1	1.4V	
	2	Fig. 1	107.9 MHz 1 kHz, 75 kHz devi.	—	107.9 MHz	AC voltmeter	C7, C9 (G)	Maximum output	
FM IF	1	Fig. 2	98.1 MHz 1 kHz, 75 kHz devi. 6.5 dBf	—	98.1 MHz	DC voltmeter	L101 Primary coil	0V	Repeat the steps 1 and 2 until no further adjustment is necessary
	2	Fig. 2	—	—	98.1 MHz	Distortion analyzer	L101 Secondary coil	Minimum	
VCO		Fig. 3	98.1 MHz No modulation 6.5 dBf	—	98.1 MHz	Frequency counter	R214	19 kHz ± 19 Hz	Remove the frequency counter after adjustment
Separation	1	Fig. 3	98.1 MHz 6.5 dBf	L ch. 1 kHz	98.1 MHz	R ch. AC voltmeter	R204	Minimum	Maximum and same separation
	2	Fig. 3	Ext. modulation	R ch. 1 kHz	—	L ch. AC voltmeter	—	Minimum	
Distortion		Fig. 3	98.1 MHz 6.5 dBf	L+R 1 kHz	98.1 MHz	Distortion analyzer	T2	Minimum	
Muting level	1	Fig. 2	98.1 MHz 17.2 dBf 1 kHz, 75 kHz devi.	—	98.1 MHz	Oscilloscope	R116	Signal output	Muting switch to on.
	2	Fig. 2	98.1 MHz 16.2 dBf 1 kHz, 75 kHz devi.	—	—	—	—	No output	



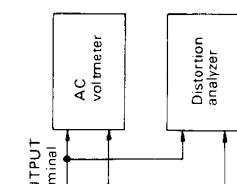
(fig. 1)



(fig. 2)

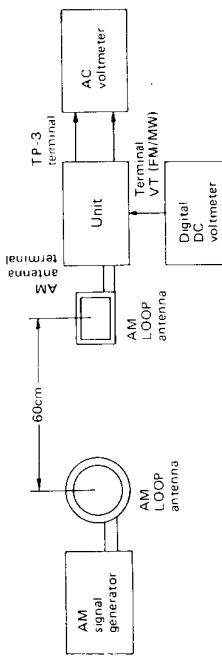


(fig. 3)

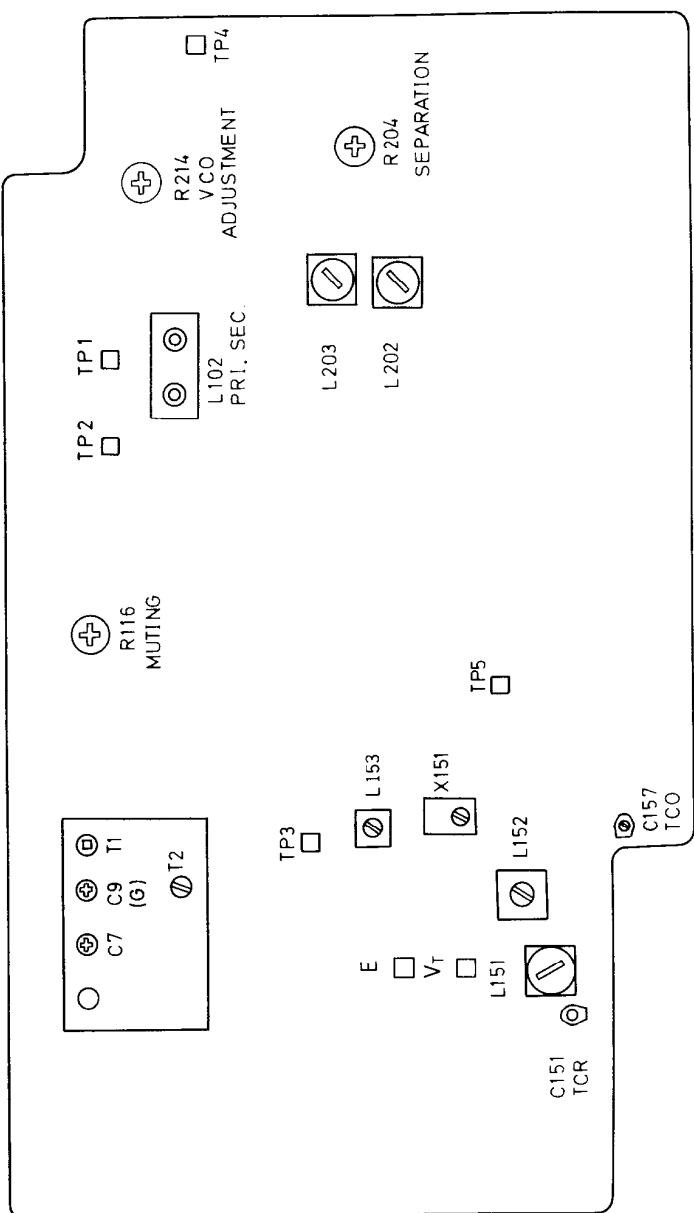


Step	AM SG output	Tuned frequency	Output indicator	Adjustment point	Adjust for	Remarks
1	999kHz (1000kHz) 400Hz 30% mod.	999kHz (1000kHz)	AC voltmeter	X151 L153	Maximum	
2		522kHz (520kHz)	Digital DC voltmeter	L152	1.2V	Repeat the steps 2 and 3 until no further adjustment is necessary.
3		1611kHz (1710kHz)	Digital DC voltmeter	C157	9.5V (10.5V)	
4	603kHz (600kHz) 400Hz 30% mod.	603kHz (600kHz)	AC voltmeter	L151	Maximum	Repeat the steps 4 and 5 until no further adjustment is necessary.
5	1404kHz (1400kHz) 400Hz 30% mod.	1404kHz (1400kHz)	AC voltmeter	C151	Maximum	

(): 120V model



- FM signal strength meter adjustment
(Only 120V model)
Set the output of FM SG to 98.1MHz,
1kHz, 75kHz devi and 65dBf.
Adjust R123 so that fourth signal
indicator lights on.



PCB PARTS LIST/VIEW FROM COMPONENT SIDE

FM/AM TUNER PCB VIEW

FM/AM TUNER PC BOARD ASS'Y (NARF-2009c/d/e)

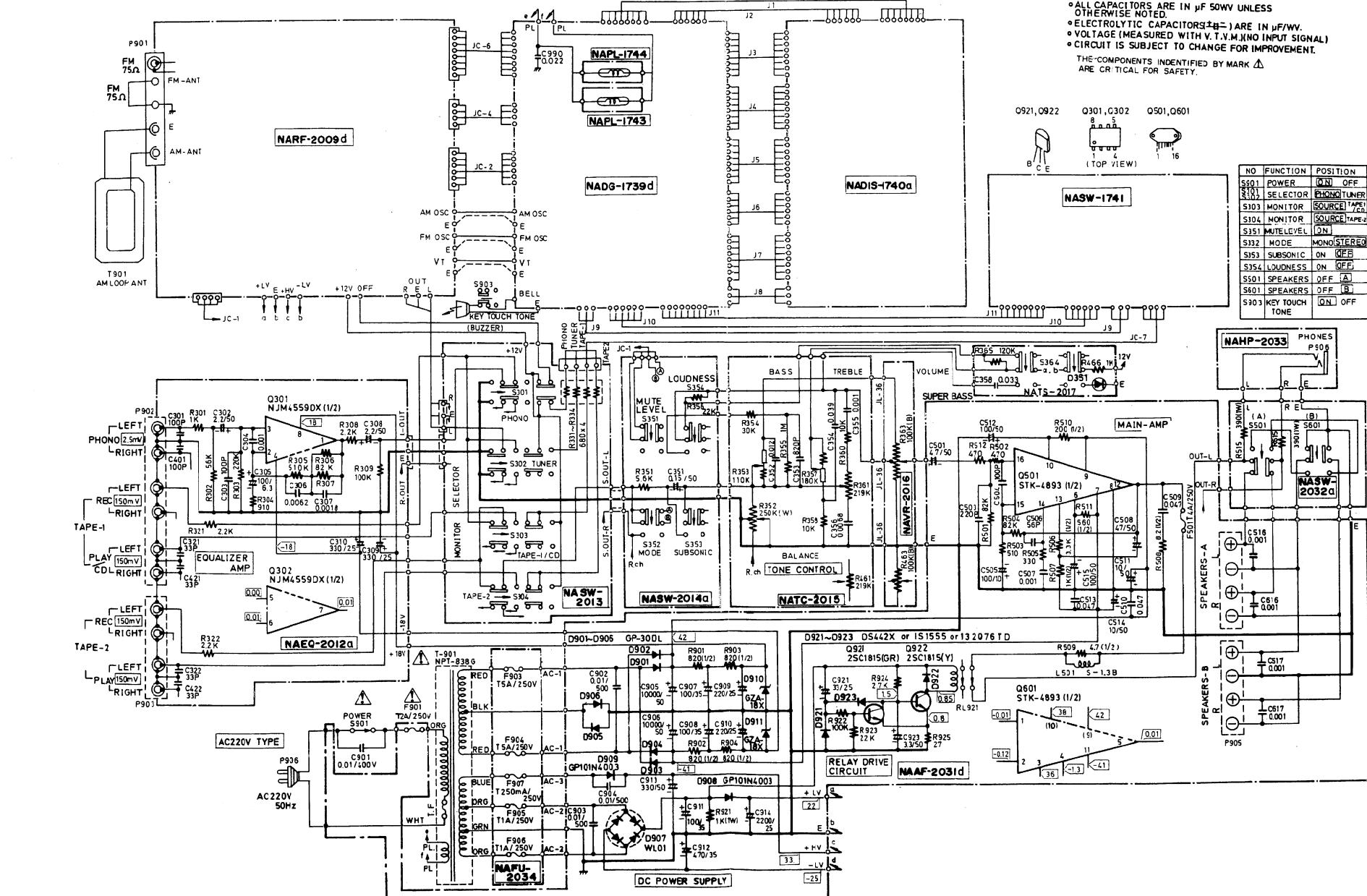
CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
		Front end			Transistors
TU001	240061	FE349U14 (D/W)	Q153-Q155	2211254,	2SC1815(Y),
	240059	FE416U33 (G)	Q801-Q804	2211255,	2SC1815(GR),
		ICs	Q807-Q809	2210746,	2SC945A(P),
Q103	222803	μ PC1267C2 (D/W)	Q141-Q144	2212484 or 2212485	JC501P or JC501Q
	222608	μ PC1167C (G)	Q204,Q205	2211705	2SD655(E)
Q152	222804 or 222629	μ PC1168C or μ PC1243C	Q805,.Q806	2211255	2SC1815(GR)
Q201	222678	μ PC1161C3	Q951,Q953	2211255	2SC1815(GR)
Q203	222575 or 222840661	TC4066BP or 4066B			Diodes
Q952	222780122	78M12	D001	2243192, 2242866 or 2239552	MTZ8.2B, EQA02-08C or RD8.2EB2(G)
		Transistors	D102	223105,	1S1555,
Q101	2211723	2SC1923(O)	D141,D142	223133,	DS442X,
Q102	2211723	2SC1923(O) (G)	D201-D203	223145 or	IS2076TD or
Q151,Q202	2211945 or 2212304	2SK246(GR) or 2SK381(D)	D801-D805	223150	US1040
Q807-Q809	2210746	2SC945A (P)	D808-D812		
Q141-Q144			D814,D817		
			D103,D153	4000068	VD1222
			D151,D152	223140	KV1236

CIRCUIT NO.	PART NO.	DESCRIPTION
D815,D816	2241291	RD3.3EB1
D951	2239792, 2243012 or 2242741	RD27EB2, EQA02-25B or GZA27X
D952	2239433, 2243133 or 2242835	RD4.7EB3, MTZ-4.7C or EQA02-05B
D953	2239433, 2243163 or 2242848	RD6.2EB3, MTZ6.2C or EQA02-06E
Transformers		
L102	233270	NF1F-6040
L153	232095	NM1F-6025
Coils		
L001	233312	NFA-3051 (G)
L101	233105 or 233024	NCH-1005 or NCCH-1501
L151	232113	NMA-3049
L152	232084	NMO-2018
L201	233236	NMC-6027 (G)
L202,L203	233291	NMC-5039
L801	231042	NCH-2082
L802	233031	NMC-9-1
Ceramic filters		
X101,X102	3010071	SFE10.7MA5 (D/W)
X101-X103	3010043	SFE10.7MM(G)
X151	3010075	SFL450B3
Capacitors		
C108, C110	352780109	1μF, 50V, Elect.
C111	352784799	0.47μF, 50V, Elect.
C117	352741009	10μF, 16V, Elect.
C142	352780339	3.3μF, 50V, Elect.
C151, C157	3060010	NTC20P09, Trimmer
C155	370135114	510pF ± 5%, 100V, APS
C163	352741019	100μF, 16V, Elect.
C167	352741009	10μF, 16V, Elect.
C168	352750479	4.7μF, 25V, Elect.
C169	352741009	10μF, 16V, Elect.
C174	352784799	0.47μF, 50V, Elect.
C202	352750479	4.7μF, 25V, Elect.
C208	352744719	470μF, 16V, Elect.
C209, C210	352741009	10μF, 16V, Elect.
C213	370134714	470pF ± 5%, 100V, APS
C214	352780109	1μF, 50V, Elect.
C215	352780339	3.3μF, 50V, Elect.
C216	352782299	0.22μF, 50V, Elect.
C218, C219	352780109	1μF, 50V, Elect.
C220	352724719	470μF, 6.3V, Elect.
C801	352780109	1μF, 50V, Elect.
C802	352780229	2.2μF, 50V, Elect.
C806	352783399	0.33μF, 50V, Elect.
C809	352780229	2.2μF, 50V, Elect.
C951	352780109	1μF, 50V, Elect.
C954	352751019	100μF, 25V, Elect.
C956	352724719	470μF, 6.3V, Elect.
C958	352780109	1μF, 50V, Elect.
C970	352751029	1,000μF, 25V, Elect.
Resistors		
R116	5215003	N08HR20KBC, Semi-fixed
R123	5215038	N08HR500KBA, Semi-fixed(D/W)
R204	5215048	N08HR200KBC, Semi-fixed
R214	5215044	N08HR5KBC, Semi-fixed
R952	441721204	12ohm, 2W, Metal oxide film
R955	441523904	39ohm, 1/2W, Metal oxide film
Terminal		
P901	25060082	NTM-4PDMN26, Antenna (D/W)
	25060083	NTM-5PDMN27, Antenna (G)
Switch		

Note: (D): Only 120V model
 (G): Only 220V model
 (W): Only 120/220V model

SCHEMATIC DIAGRAM

-G/Q MODELS-

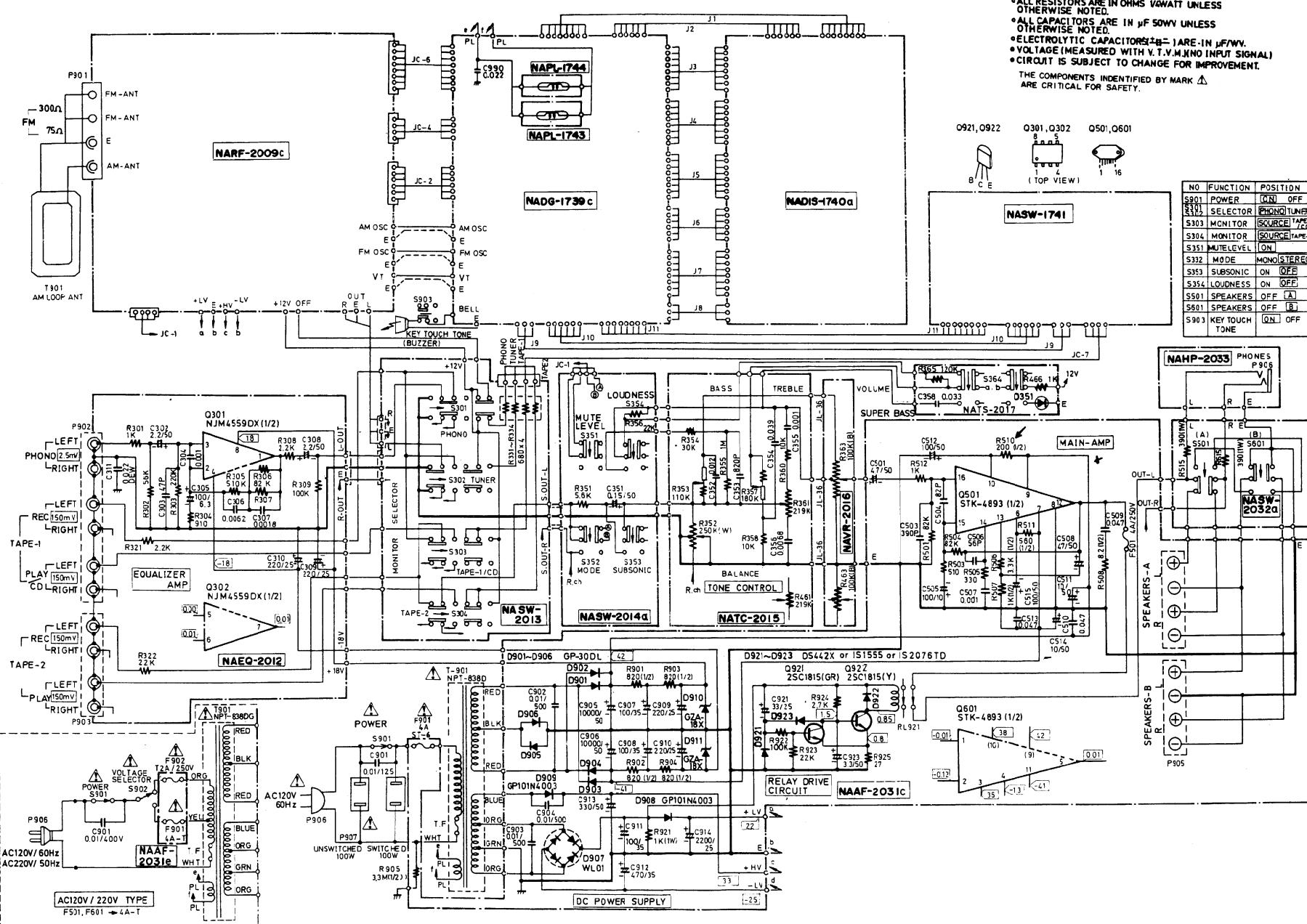


A B C D E F G

SCHEMATIC DIAGRAM

- D/W MODELS -

NOTES
 • ALL RESISTORS ARE IN OHMS 1WATT UNLESS OTHERWISE NOTED.
 • ALL CAPACITORS ARE IN μ F 50V UNLESS OTHERWISE NOTED.
 • ELECTROLYTIC CAPACITORS ARE IN μ F 50V UNLESS OTHERWISE NOTED.
 • VOLTAGE (MEASURED WITH V.T.V.M.) NO INPUT SIGNAL.
 • CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
 THE COMPONENTS INDENTIFIED BY MARK Δ
 ARE CRITICAL FOR SAFETY.



PCB PARTS LIST/VIEW FROM COMPONENT SIDE

DIGITAL CIRCUIT PCB VIEW

1

2

TUNER SWITCH PC BOARD ASS'Y (NASW-1741)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
-------------	-----------	-------------

LEDs		
D759	225126	GL3PR1
D865, D866	225137	SEL2413E
D867, D868	225142	SEL2913K

Switches		
S751-S765	25035275	NPS-111-S239

Spacer		
27270103		

Holders		
27190224	LED	

DE-EMPHASIS SWITCH PC BOARD ASS'Y (NASW-1737) (Only W model)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
S201	250142	NSS-2225, De-emphasis switch

BAND SELECTOR SWITCH PC BOARD ASS'Y (NASW-1742) (Only W model)

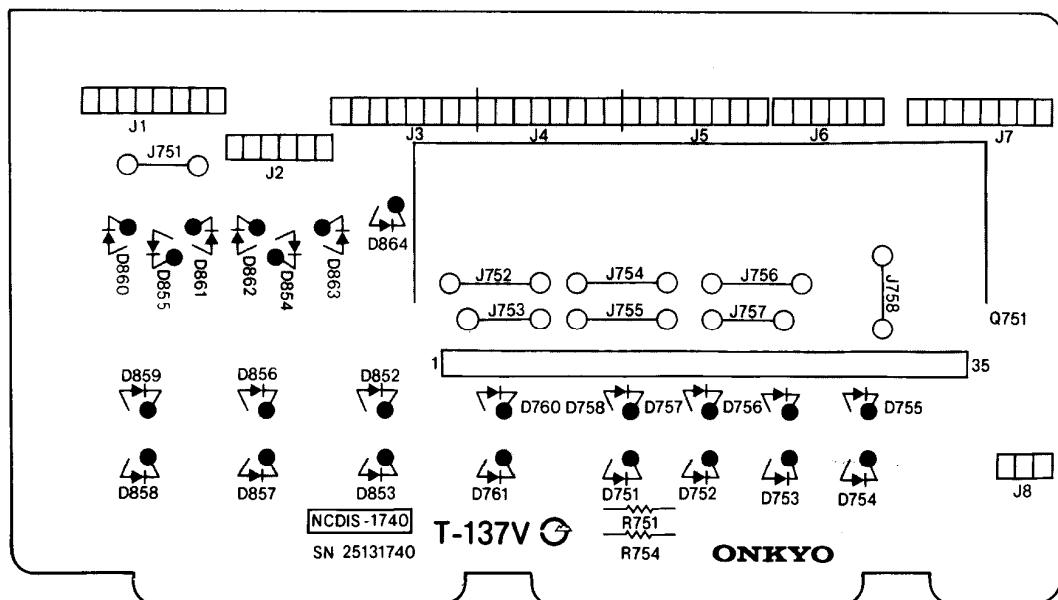
CIRCUIT NO.	PARTS NO.	DESCRIPTION
S701	250142	NSS-2225, Switch

DIAL PLATE ILLUMINATION LAMP PC BOARD ASS'Y (NAPL-1743/1744)

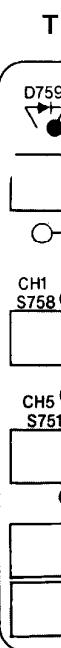
CIRCUIT NO.	PARTS NO.	DESCRIPTION
PL901	210162	PL6. 3V0. 25A, Lamp

FLUORESCENT INDICATOR TUBE PCB VIEW

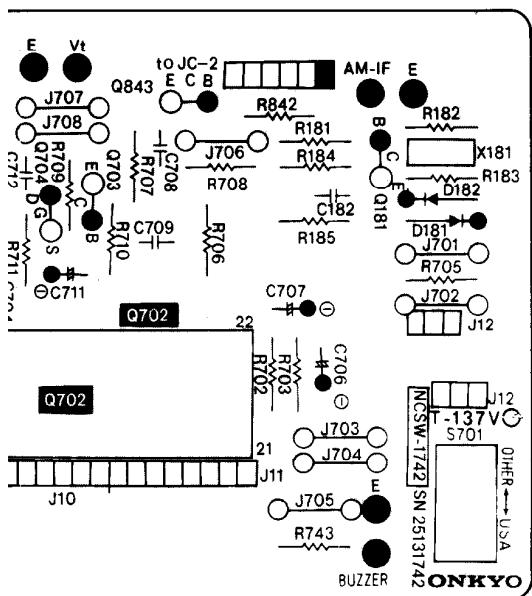
4



5



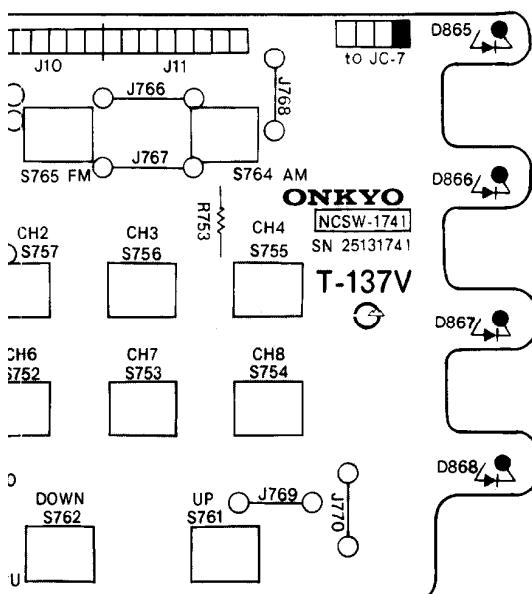
Notes: (D): Only 120V model
(G): Only 220V model
(W): Only 120/220V model
(O): Only 240V model



BUZZER PC BOARD PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	241048	PKM24-4A0, Buzzer

SWITCH PCB VIEW

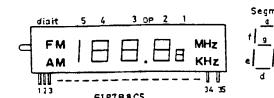
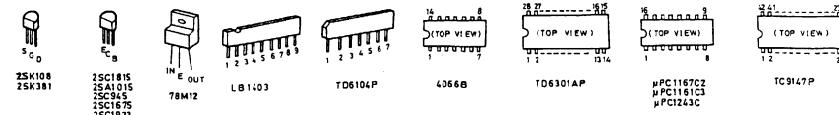
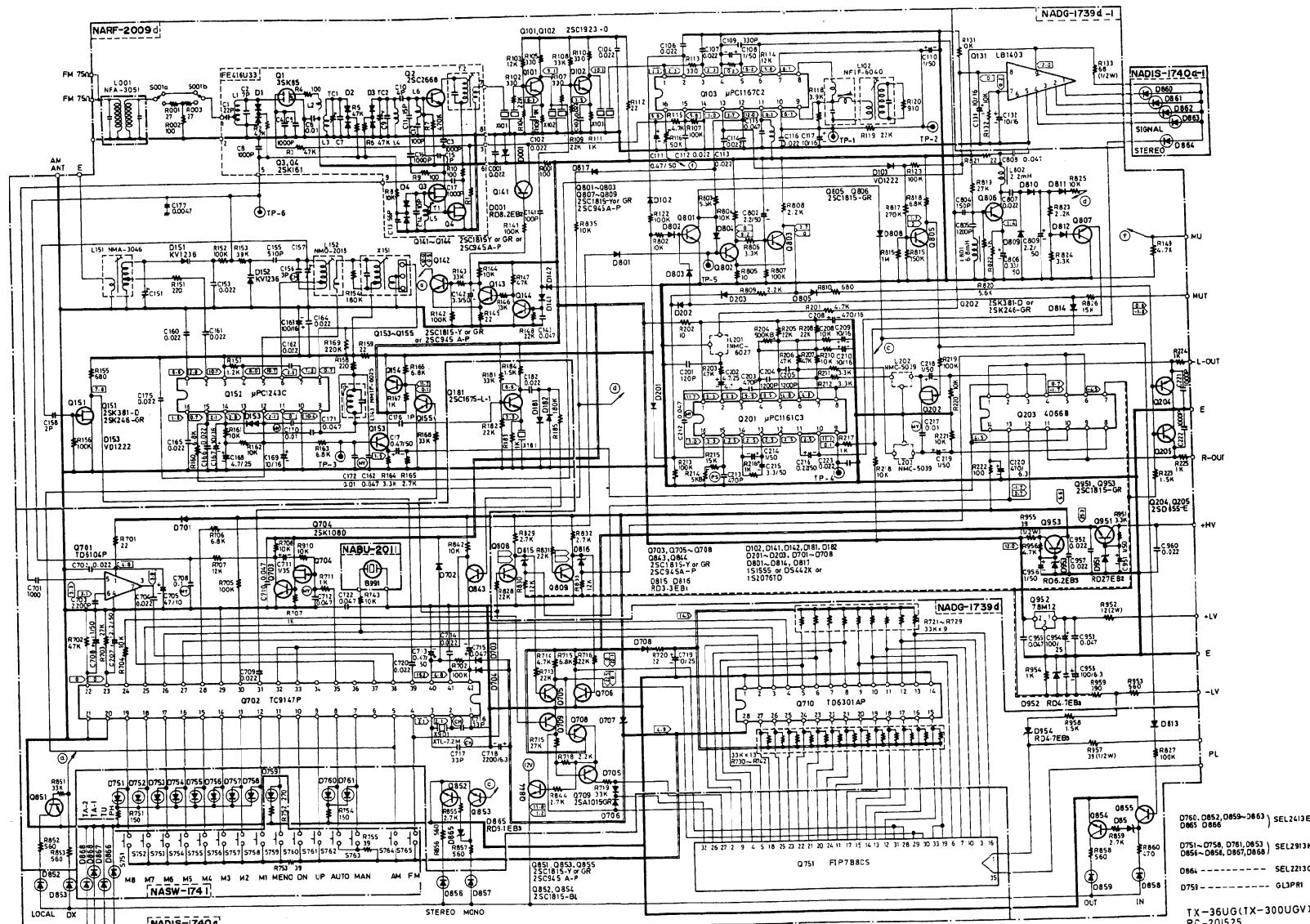


**DIGITAL CIRCUIT PC BOARD ASS'Y
(NADG-1739c/d/e)**

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q701	222675	TD6104P, Prescaler
Q702	222674	TC9147P, PLL synthesizer/controller
Q710	222673	TD6301AP, Static frequency indicator driver
Q131	222666	LB1403
Transistors		
Q703	2211255	2SC1815 (GR)
Q704	2212294	2SK108 (D)
Q705, Q706	2211254,	2SC1815 (Y),
Q855, Q843	2211255 or	2SC1815 (GR) or
Q851, Q853,	2210746	2SC945A (P)
Q844	2211256	2SC1815 (BL)
Q852, Q854	2211256	2SC1815 (BL)
Q707, Q708	2211255	2SC1815 (GR) (G/Q/W)
Q709	2211455	2SA1015 (GR) (G/Q/W)
Q181	2210823	2SC1675 (L-1)
Diodes		
D181, D182	223105,	1S1555,
D701-D704	223133 or	DS442X or
D707, D708	223145	1S2076TD
D813		
D705, D706	223105, 223133 or 223145	1S1555, DS442X or 1S2076TD (G/Q/W)
D851, D865	224178, 2241052 or 2239573	05Z9. 1Y, GZA9. 1EB3 or RD9. 1EB3
D954	2239433	RD4. 7EB3
Ceramic filter		
X181	3010076	BFU450C
X'tal		
X701	3010073	XTL-7.2M TX6\
Capacitors		
C705	352734709	47μF, 10V, Elect.
C706	352780109	1μF, 50V, Elect.
C707	352780229	2.2μF, 50V, Elect.
C711	395160107	1μF, 35V, Tantalum
C713	352784799	0.47μF, 50V, Elect.
C715	3020018	0.047F, 5V, Super
C718	352722229	2,200μF, 6.3V, Elect.
C719	352751009	10μF, 25V, Elect.
C841	352780339	3.3μF, 50V, Elect.
C131, C132	352740109	10μF, 16V, Elect.
Resistors		
R721-R729	49121333509	33kohmx9, 1/8W, Network
R730-R742	49121333513	33kohmx13, 1/8W, Network
R957	441523904	39ohm, 1/2W, Metal oxide film
R133	441526804	68ohm, 1/2W, Metal oxide film
FLUORESCENT INDICATOR TUBE PC BOARD ASS'Y (NADIS-1740a)		
CIRCUIT NO.	PART NO.	DESCRIPTION
Fluorescent indicator tube		
Q751	212016	FIP7B8CS
LEDs		
D751-D758	225142	SEL2913K
D761, D853	225137	SEL2413E
D760, D852		
D859-D863		
D856-D858	225142	SEL2913K
D864	225141	SEL2213C
Holders		
	27190222	LED16
	27190230	LED5
Cushion		
	28140513	40x10x8mm

SCHEMATIC DIAGRAM

– G/Q MODELS –



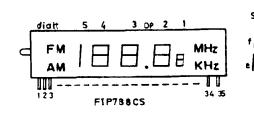
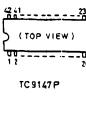
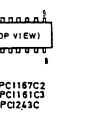
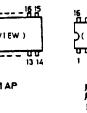
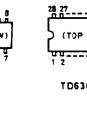
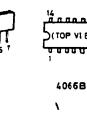
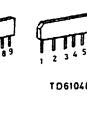
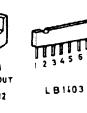
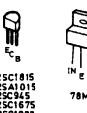
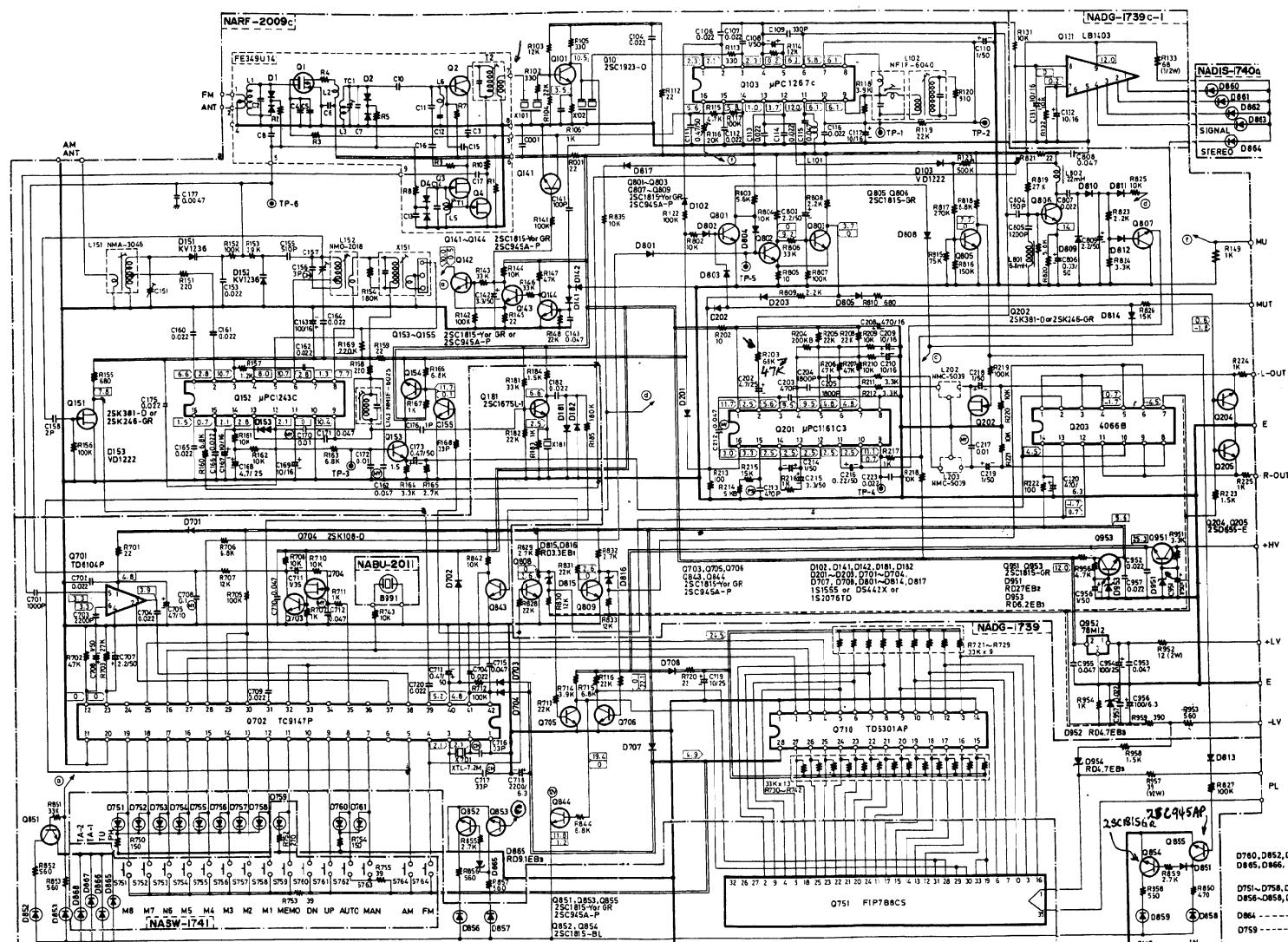
NOT

- ALL RESISTORS ARE IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.
 - ALL CAPACITORS ARE IN μ F 50VU UNLESS OTHERWISE NOTED.
 - ELECTROLYTIC CAPACITORS ($-\#-$) ARE IN μ F/WV.
 - VOLTAGE (MEASURED WITH V.T.V. M.) (NO INPUT SIGNAL)
 - CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

ONKYO CORPORATION

SCHEMATIC DIAGRAM

- 120V MODEL -

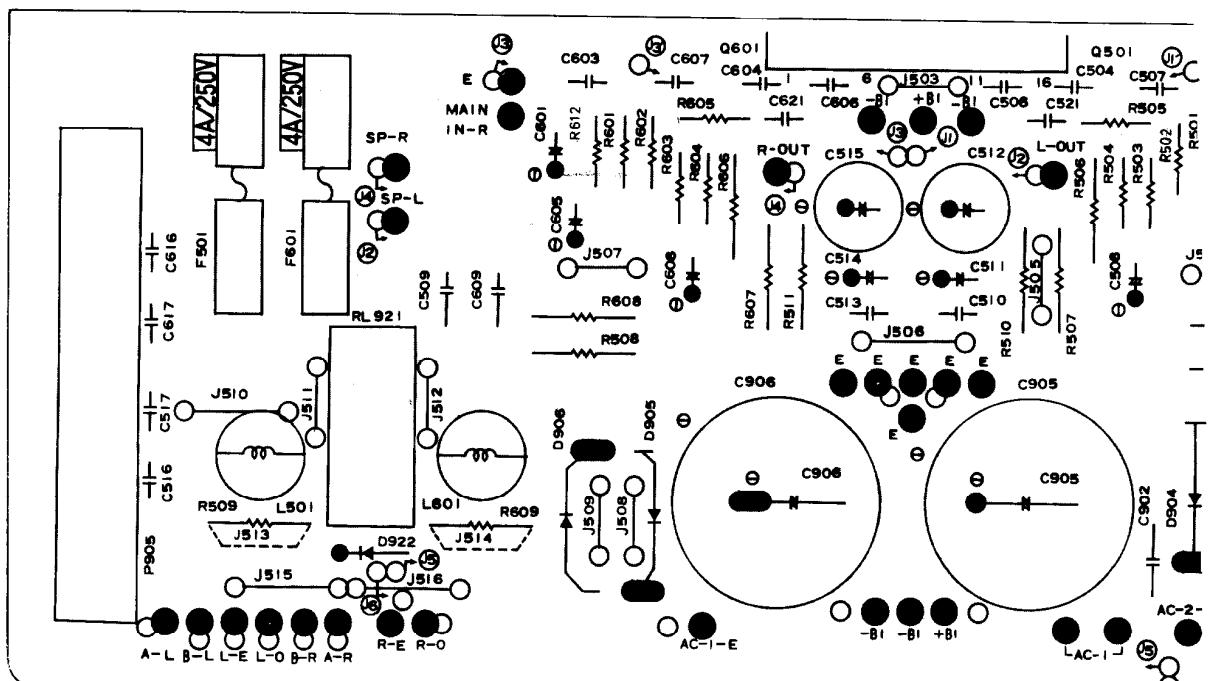


NOTES

- ALL RESISTORS ARE IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μ F 50V UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (---) ARE IN $\mu\text{F}/\text{MV}$.
- VOLTAGE (MEASURED WITH V.T.V.M.) (NO INPUT SIGNAL)
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

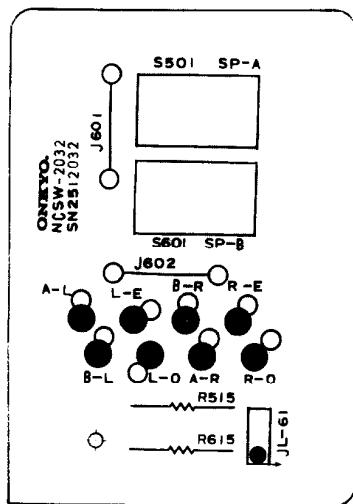
PCB PARTS LIST/VIEW FROM COMPONENT SIDE

POWER SUPPLY AND AMPLIFIER PCB VIEW



SPEAKER SELECTOR

SWITCH PCB VIEW



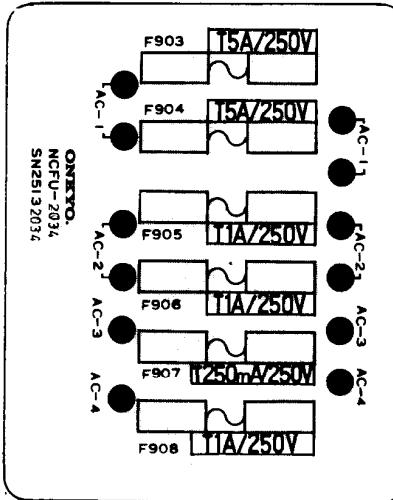
**SPEAKER SELECTOR SWITCH PC BOARD ASS'Y
(NASW-2032a)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R515, R615	441523914	390ohm, 1/2W, Metal oxide film
	Switches	
S501, S601	25035397	NPS-222-L361

**HEADPHONE TERMINAL PC BOARD ASS'Y
(NAHP-2033)**

CIRCUIT NO.	PARTS NO.	DESCRIPTION
P906	25045138	HLJ0520-01-010

FUSE PCB VIEW



FUSE TERMINAL PC BOARD ASS'Y (NAFU-2034)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Fuseholders	
	25050065	YSH403T
	Fuses	
△ F903, F904	252078	5A-SE-EAK
△ F905, F906	252070	1A-SE-EAK
△ F907	252088	250mA-SE-EAWK
		(Only 220/240V models)

NCAF-2031

Note: (D): Only 120V model
 (G): Only 220V model
 (W): Only 120/220V model
 (Q): Only 240V model

POWER SUPPLY AND POWER AMPLIFIER CIRCUIT
PC BOARD ASS'Y (NAAF-2031c/d/e)

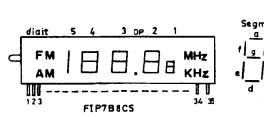
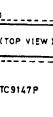
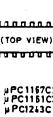
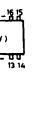
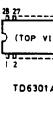
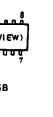
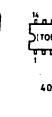
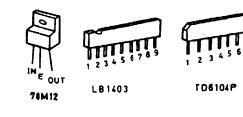
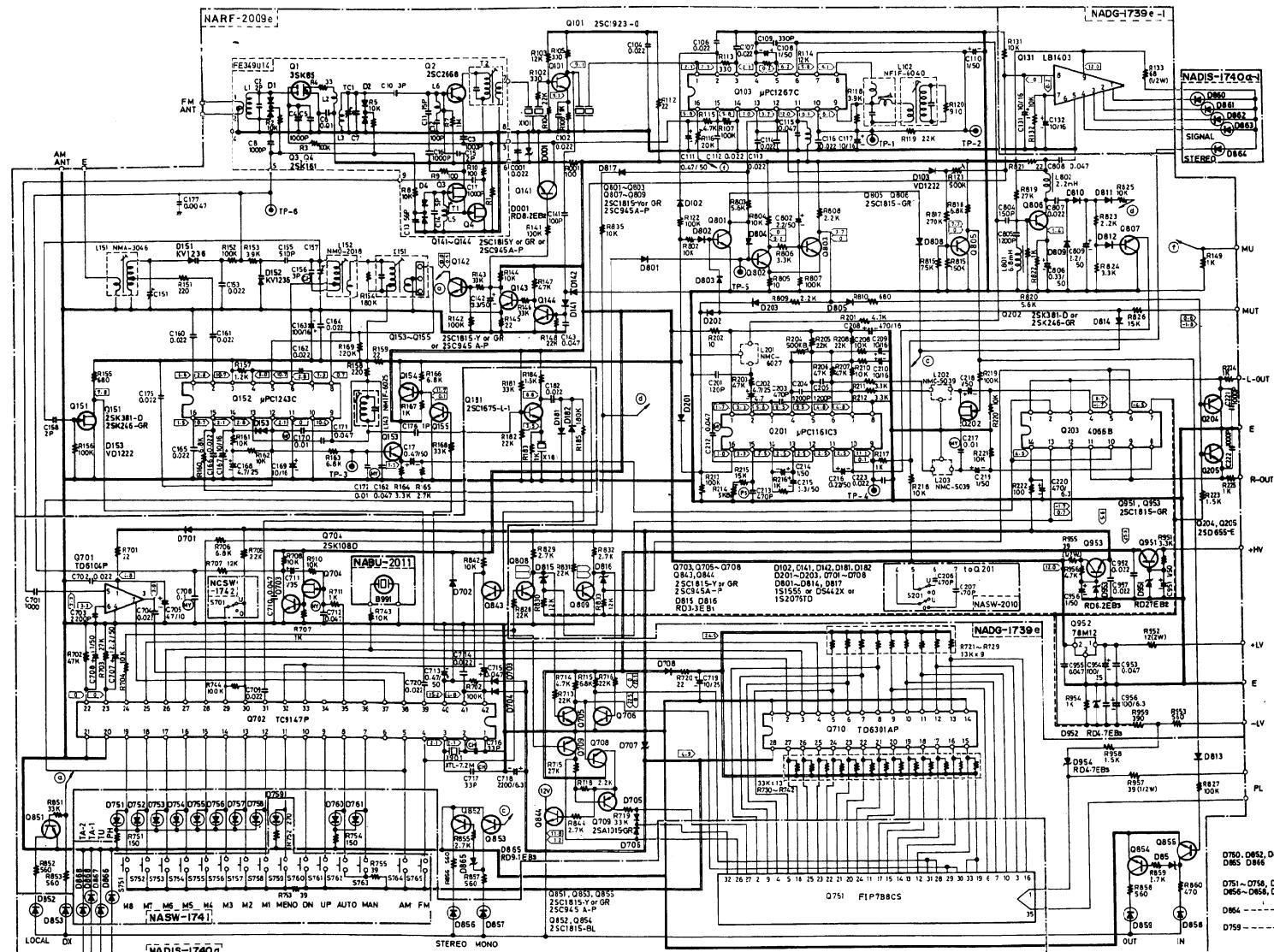
CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q501, Q601	222036	STK-4893, Power amplifier
	Transistors	
Q921	2211255	2SC1815 (GR)
Q922	2211254	2SC1815 (Y)
	Diodes	
D901-D906	223863	GP30DL
D907	223862	WL-01
D908, D909	223880	GP101N4003
D910, D911	2241191, 2241192 or 2243273	GZA-18X GZA-18Y or MTZ-18C
D921-D923	223145, 223133 223105 or 223150	1S2076TD, DS442X 1S1555 or US1040
	Coils	
L501, L601	231001	S1. 3B (G/Q)
	Capacitors	
C501, C601	352780479	4.7μF, 50V, Elect.
C505, C605	352731019	100μF, 10V, Elect.
C508, C608	352784709	47μF, 50V, Elect.
C511, C514	352781009	10μF, 50V, Elect.
C512, C515	352781019	100μF, 50V, Elect.
C905, C906	3504178	10.000μF, 50V, Elect.
C907, C908	352761019	100μF, 35V, Elect.
C909, C910	352752219	220μF, 25V, Elect.
C911	352761019	100μF, 35V, Elect.
C912	352764719	470μF, 35V, Elect.
C913	352783319	330μF, 50V, Elect.
C914	352752229	2.200μF, 25V, Elect.
C921	352753309	33μF, 25V, Elect.
C923	352780339	3.3μF, 50V, Elect.
	Resistors	
R506, R606	441523324	3.3kohm, 1/2W, Metal oxide film
R507, R607	441521024	1kohm, 1/2W, Metal oxide film
R508, R608	441520824	8.2ohm, 1/2W, Metal oxide film
R509, R609	441520474	4.7ohm, 1/2W, Metal oxide film (G/Q)
R510	441522014	200ohm, 1/2W, Metal oxide film
R511	441525614	560ohm, 1/2W, Metal oxide film
R901-R904	441528214	820ohm, 1/2W, Metal oxide film
R905	431523355	3.3Mohm, 1/2W, Solid (D)
R921	441621024	1kohm, 1W, Metal oxide film
	Relay	
RL921	25065134	NRL-2P5A-DC24-07
	Terminal	
P905	25060058	NTM-8PDML25, Speaker
	Fuseholders	
△ F901a, F501a F601a F902a F501a, F601a	250113	SN5051 (D/W)
	25050065	YSH403T (G/Q/W)
	25050065	YSH403T (G/Q)
	Fuses	
△ F501, F601	252059 252077	4A (SS-2), Speaker (D/W) 4A-SE-EAK, Speaker (G/Q)
△ F901	252049	4A (ST-6), Primary (D/W)
△ F902	252074	2A-SE-EAK, Primary (G/Q/W)

NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

A B C D E F G TX-36

SCHEMATIC DIAGRAM

-120/220V MODEL-

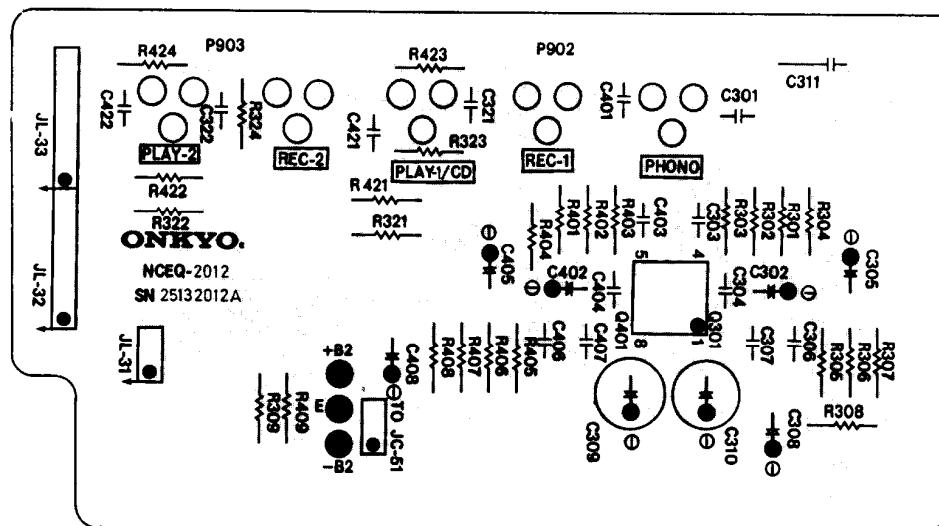


NOTES

- ALL RESISTORS ARE IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μ F 50V UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (—E—) ARE IN μ F/V.
- VOLTAGE (MEASURED WITH V.T.V. M.) (NO INPUT SIGNAL)
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

PCB PARTS LIST/VIEW FROM COMPONENT SIDE

EQUALIZER AMPLIFIER PCB VIEW

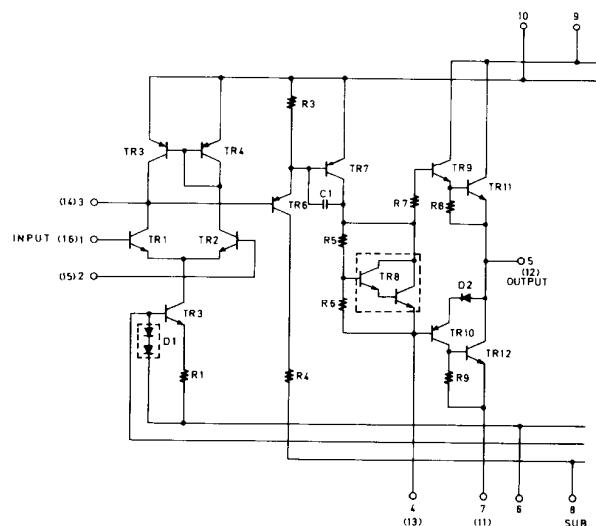


EQUALIZER AMPLIFIER PC BOARD ASS'Y (NAEO-2012/a)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q301, Q401	222534	NJM-4559DX
	222502 or	NJM-4558DX or
	222570	NJM-4560DX
	Capacitors	
C302, C402-	352780229	2.2μF, 50V, Elect.
C305, C405	352721019	100μF, 6.3V, Elect.
C308, C408	352780229	2.2μF, 50V, Elect.
C309, C310	352752219	220μF, 25V, Elect.
	Terminals	
P902	25045137	NPJ-6PDBL52, Phono/Tape 1
P903	25045084	NPJ-4PDBL42, Tape 2

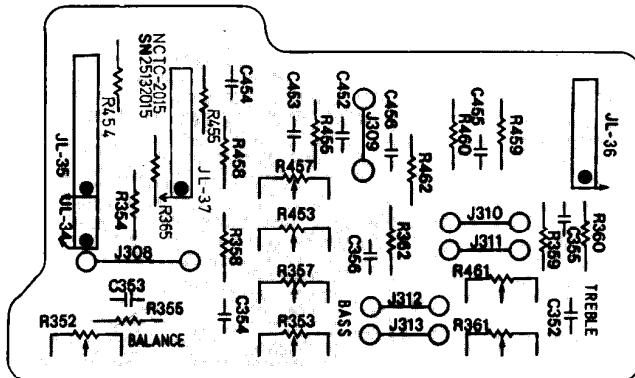
BLOCK DIAGRAM

STK-4893 (Power amplifier)

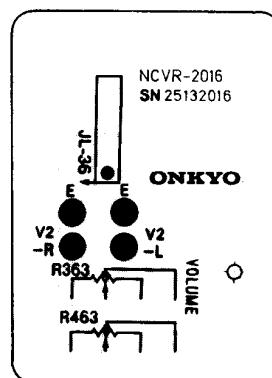


NJM-4559DX (Equalizer amplifier)

TONE CONTROL PCB VIEW



VOLUME CONTROL PCB VIEW



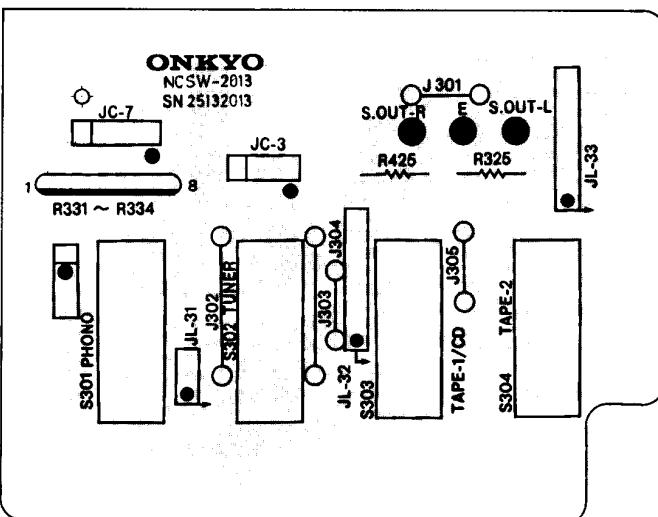
TONE CONTROL CIRCUIT PC BOARD ASS'Y (NATC-2015)

CIRCUIT NO.	PART NO.	DESCRIPTION
Variable resistors		
R352	5146034	N16RLC250KWT30, Balance
R353, R453	5148073	N16RQMC110K180K30, Bass
R357, R457		
R361, R461	5148074	N16RGMC219K30, Treble

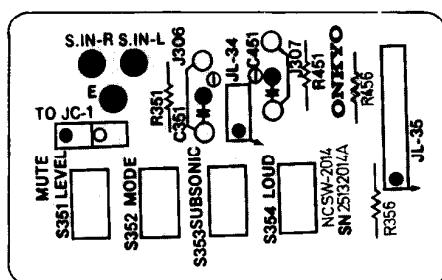
VOLUME CONTROL PC BOARD ASS'Y (NAVR-2016)

CIRCUIT NO.	PARTS NO.	DESCRIPTION
R363, R463	5148093	N16RGM100KBT35, Variable resistor

SELECTOR SWITCH PCB VIEW



SWITCH PCB VIEW



SWITCH PC BOARD ASS'Y (NASW-2014a)

CIRCUIT NO.	PART NO.	DESCRIPTION
S351-S354	25035400	NPS-422-L360, Push switch
C351, C451	352781599	0.15μF, 50V, Elect. capacitor

SELECTOR SWITCH PC BOARD ASS'Y (NASW-2013)

CIRCUIT NO.	PART NO.	DESCRIPTION
Resistor		
R331-R334	49241681504	680ohm×4, 1/4W, Network
Switches		
S301-S304	25035395	NPS-442-L358, Push

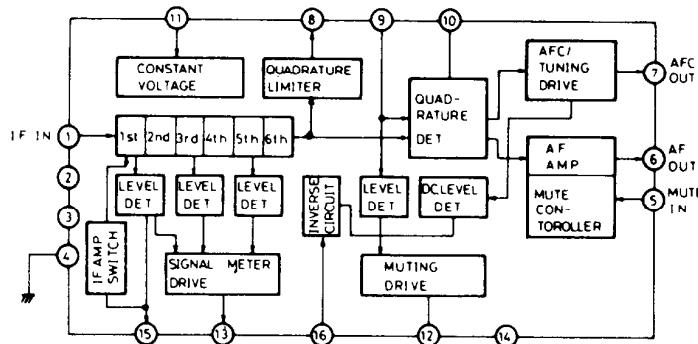
SUPER BASE PC BOARD ASS'Y (NATS-2017)

CIRCUIT NO.	PART NO.	DESCRIPTION
D351	225141	SEL2213C, LED
S364	25035422	NPS-142-L386, Push SWITCH
	27190273	Holder, LED

BLOCK DIAGRAM OF IC

μ PC1267C/ μ PC1167C2 (FM IF system)

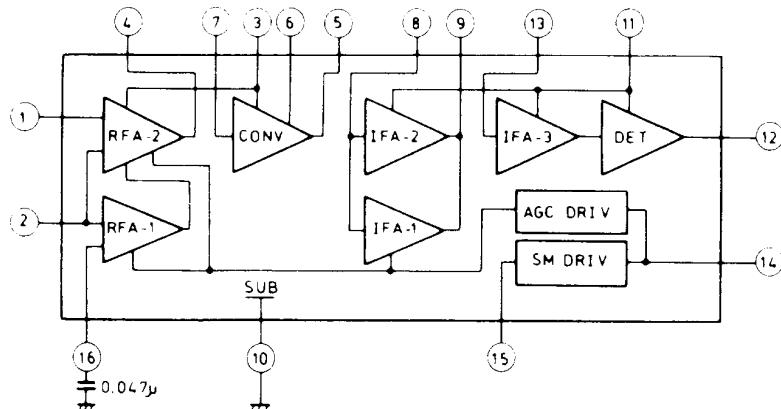
1



2

μ PC1168C/ μ PC1243C (AM radio system)

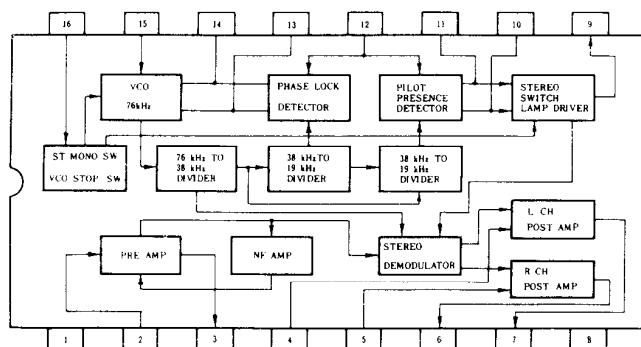
3



4

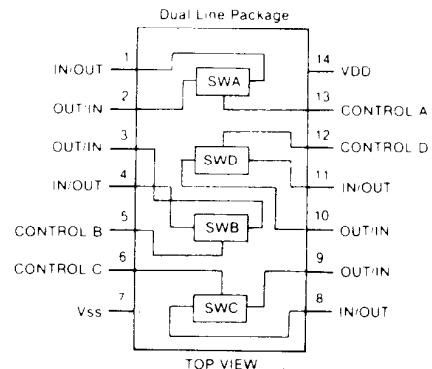
μ PC1161C3 (Stereo decoder)

5

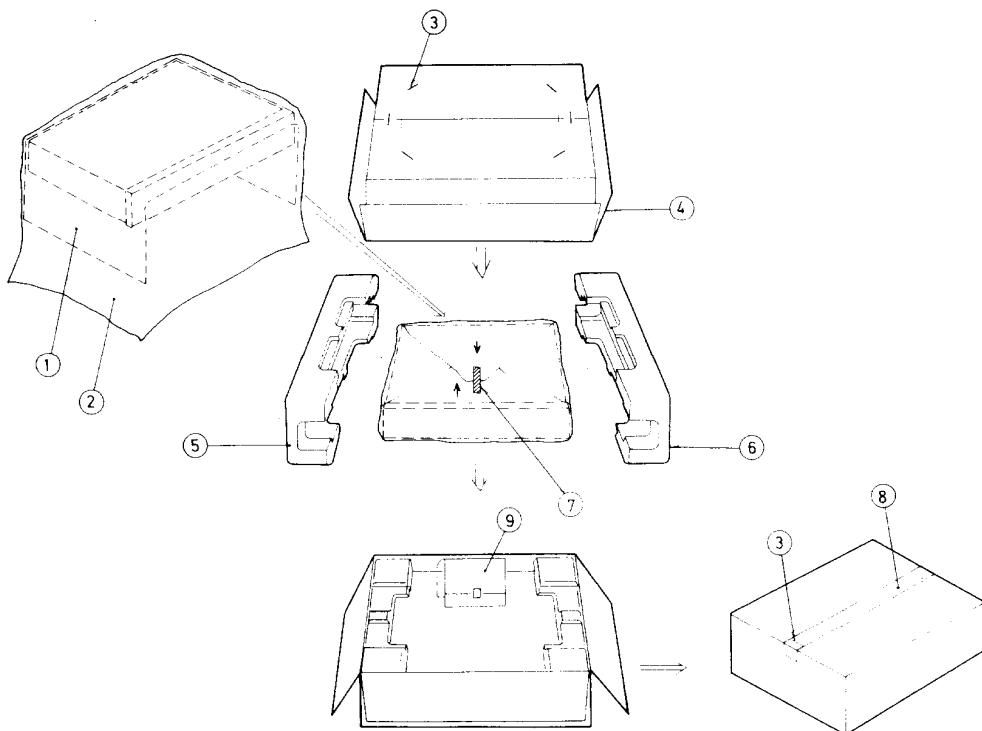


1. IF signal input
2. IF amplifier switch inp
H level: Off
5. Muting switch input
6. Composite signal output
7. AFC output
8. IF amplifier output
9. 10.7MHz input
10. Reference voltage
11. Power supply
12. Muting output
Tuned: L level
13. Signal strength output
15. AGC output
16. Muting level

TC4066BP (Analogue switch)



PACKING VIEW



REF. NO.	PART NO.	DESCRIPTION		
1	29095012-1	500×800mm, Protection sheet		
2	29100034	650×850mm, Poly-vinyl bag		
3	282301	Sealing hook		
4	29050971	Master carton box		
	29050972	Master carton box (B)		
5	29090817A	Pad R		
6	29090816B	Pad L		
7	29110032	W=15mm, Adhesive tape		
8	260012	50(W)×600mm, Damplon tape		
9		Accessory bag complete		
		U.S.A. model		
	292064A	FM antenna	120V model	FM antenna
	29100006	350×250mm, Poly-vinyl bag		350×250mm, Poly-vinyl bag
	29340770	Instruction manual		Instruction manual
	29365006-5	Warranty card	220V model	
	29358002A	Service station list		
			292064A	FM antenna
			29100006	350×250mm, Poly-vinyl bag
			29340771	Instruction manual
			25055040	CV-K-2, Conversion plug

Note: (B): Only black model

ONKYO CORPORATION

International Division: No. 24 Mori Bldg., 23-5, 3-chome, Nishi-Shinbashi, Minato-ku, Tokyo, Japan
 Telex: 2423551 ONKYO J. Phone: 03-432-6981

ONKYO U.S.A. CORPORATION

200 Williams Drive, Ramsey, N.J. 07446 Tel. 201-825-7950

ONKYO DEUTSCHLAND GMBH, ELECTRONICS

8034 München-Germering, Industriestrasse 18, West Germany. Telex: 521726 Telefon: (089)-84-3071